

Die giftige Rebendolde - The Hemlock Water Dropwort



Oenanthe crocata

"Hemlock dropwort is one of the most terrible poisons
which the vegetable kingdom produces."

(B. Wilmer, 1781)

"Considering the great activity of this poison, that it is capable, as we have seen,
of extinguishing the life of a strong young man in full health in one hour, and that many other
fatal cases are recorded, it is rather singular that the nature of the active principle of the
oenanthe is not yet well known, or the plant applied to medicinal use."

(P. Bossey, 1844)

"L'oenanthe crocata a donné lieu à un grand nombre d'empoisonnements;
des cas nombreux déterminés par cette plante ont été observés en France, en Corse,
en Angleterre, en Holland."

(Journal de chimie médicale 1845)

"L'Oenanthe crocata, le Phellandrium Aquaticum, la Cicutia virosa, etc. qui attirèrent surtout
dans le siècle dernier l'attention des médecins, ont donné lieu à beaucoup d'observations, dont
le plus grand nombre perdait énormément de leur intérêt, parce que, par la compulsion des
écrits auxquels elles donnèrent lieu, on se convaint facilement qu'ils firent une confusion
complète d'espèces absolument disparates. Témoins les caractères sur lesquels ils basèrent
leurs diagnoses botaniques qui ne peuvent inspirer la moindre confiance."

(Ch. Demoor, 1896)

"On croît, en lisant les observations d'empoisonnement, avoir affaire à de véritables attaques
d'épilepsie, tant les symptômes sont semblables. La plupart des malades tombant tout à coup,
fort peu ont le temps de courir chercher des secours : il semble dans la plupart des cas que
l'action soit immédiate sur le cerveau."

(P. Bloc, 1873)

"*Oenanthe crocata* is a great remedy in convulsions of an epileptic form,
therefore I would like to draw the attention of physicians to its value."

(F. G. Oehme, 1877)

"Si de nouvelles expérimentations de l'*oenanthe crocata* dans l'épilepsie donnaient de bons
résultats, les malades seraient soustraits à l'administration du *bromure de potassium* qui
amène souvent tant d'inconvénients et même d'accidents, quelquefois mortels."

(E. Hermel, 1883)

"In order to prescribe the drug with accuracy
proving will be necessary to develop its finer symptomatology."

(W. A. Dewey, 1900)

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Namen

Oenanthe crocata (Linné); Oenanthe Cicutae facie succo viroso crocante (Lobel).

(*engl.*) Hemlock Water-Dropwort. Hemlock-Dropwort. Five finger's root. Dead Tongue (Cumberland).

(Ireland) Macken-thaou (signifying "water-root"). Dahoe or Tahoe (signifying death).

(*frz.*) oenanthe safranée. painpain, parsacre, pensacre, persil laiteux, pinpin, navet du diable, Belle ou Bène; (racine:) navette, pain frais.

(*dt.*) Giftige Rebendolde. Safran-Rebendolde.

Die Giftige Rebendolde - Carl von Linné

"Diese Art, die man auch Schierlings-Filipendel nennet, und die von einigen mit der Cicuta virosa, der sie zwar in den Wirkungen ziemlich ähnlich ist, verwechselt wird, wächst in ganz Europa in Sümpfen und andern wässerichten Orten; und blühet im Junius. Sie ist nach Hallers Vermuthung die Sardonias der Alten. Ihre Wurzel ist perennirend, und besteht aus vier bis fünf länglichten, oben in eins zusammengewachsenen Wurzeln, die dem äussern Aussehen nach ziemlich den Pastinakwurzeln gleichen; ihr Stengel ist roth oder braungelb, dick, knotig, gestreift, ästig, und wird drey, vier bis sechs Schuh hoch; die Blätter sind theils einfach, theils und zwar meistens doppelt gefiedert, und bestehen aus keilförmigen, stumpfen, eingeschnittenen, glatten, gestrichelten Blättlein. Die Blumendolden sind groß, und haben keine gemeinschaftliche Hülle; die Stiele, welche die besondern Dolden tragen, sind eckig und gestreift; die Blumen sind weiß, und haben nur braune Staubbeutel. Alle Theile dieser Pflanze und vornehmlich die Wurzel sind voll von einem weissen Milchsaft, der aber, so bald er eine Weile an der Luft ist, eine safrangelbe Farbe bekommt; dieser Saft hat einen säuerlichten Geschmack und einen stinkenden Geruch, und ist sehr giftig, indem man auf den Genuß der Wurzeln oder des aus ihnen gepreßten Safts Übelseyn, große Mattigkeit, Gichter, Kinnbackenzwang, Verdrehen der Augen, Sinnlosigkeit, Verwirrung, Ohnmachten, Lähmung, und wo entweder die Dosis zu groß war, oder nicht schleunige Rettung geschafft wurde, den Tod erfolgen gesehen. In den Leichen der durch dieses Gift getödteten Personen fand man keine Entzündung der Eingeweide; und sowol nach diesem, als nach den vorhergegangenen Zufällen scheint die Pflanze unter die narkotische Gifte zu gehören. Brechmittel, und häufiges Getränke von lauer Milch, warmen Wasser, Oel und schleimichte Dinge werden vor die beste Rettungsmittel gehalten. Man sehe Gmelins Geschichte der Pflanzengifte S.64-71."

(Des Ritters Carl von Linné vollständiges Pflanzensystem, Sechster Theil, Von den Kräutern, Nürnberg 1780, Die Giftige Rebendolde, S. 136-137)

The hemlock water dropwort - A. T. Thomson

"Oenanthe crocata, hemlock water dropwort, is a common indigenous plant, growing on the banks of ditches and in watery places, flowering in June; it grows to the height of two or three feet: the root is fleshy, and filled with a milky-looking juice, which becomes of a yellow, saffron hue, when it is exposed to the air. The leaves are large, and supported by a dilated

petiole; they are three times winged, and formed of deeply-incised leaflets, with obtuse divisions. The flowers are white, pressed one against the other, and supported on umbels composed of rays so short that the umbellules appear also as if compressed upon one another; both the involucre and the involucral are composed of linear leaflets; the fruit, which is crowned both by the persistent calyx and the styles, is ovoid and oblong.

Every part of the plant is poisonous; its recent juice is so acrid that it excoriates the skin when it is applied to it.

The herbaceous part of the plant has been mistaken by the ignorant for wild celery, the foliage of which it somewhat resembles."

(Lectures on Medical Jurisprudence, now in course of delivery, at the University College London, by Professor A. T. Thomson, The Lancet 1836, vol. 2, p. 850)

One of the two most poisonous plants growing naturally in England - Richard Pulteney

"The two most poisonous plants perhaps naturally growing in England, are such as have, from their general resemblance to the *water parsnep*, been frequently mistaken for it, and numerous instances have confirmed the very virulent effects of them. These two plants are the *hemlock dropwort* (*oenanthe crocata*), and the *long-leaved water hemlock* (*cicuta virosa*). These, together with the *water parsnep*, the *hemlock*, or *kex*, as it is vulgarly called, *smallage*, *fools parsley*, or lesser hemlock, and many other of the same natural class called by Botanists umbelliferous plants, have such a general likeness in the manner of growing, the form of the leaves, and in the mode of flowering, that it is not at all surprising, that unskilful people, and those not used to the nicer discriminations, which hold among plants of the same natural class, should mistake one for the other; add to this, that the smell of the herb, and the root of *hemlock dropwort*, not unpleasant, not very unlike that of the *parsnep*, may still farther impose upon the ignorant and unwary.

The *long-leaved water hemlock* is rarely found in the county of Dorset; whereas the *hemlock dropwort* is very common, much more so than the *water parsnep*, by the sides of the rivers and brooks, and in wet ditches, particularly such as communicate with running waters, by which means the seeds and roots are carried by floods to a distance from the borders of the rivers. It is never seen on dry and hilly grounds, nor even meadows, unless in such as are liable to be flooded. The leaves are much smaller cut, more succulent, and of a deeper green, than those of the *water parsnep*, and more resemble those of *smallage* and *parsley*. But there is one distinction which will never fail, if properly attended to, and it is earnestly recommended to all those who are dubious of the plant they mean to procure, to attend to it. The root of the *hemlock dropwort* consists, not of one conical or top-root, like a *parsnep*, neither of a number of fibres, nor of a single round bulb or two, but is what may be called a fingered root, all proceeding from the bottom of the stalk as from a center, and in proportion to the age or vigour of the plant, smaller or larger, each of them usually as thick, and nearly as long, as the finger, and from three, or four, to six, eight, or ten in number.

Of the *water parsnep* there are three species growing in England, each of them more or less frequently found in different parts of the kingdom; and all growing in water or watery situations. These are the *sium latifolium*, broad-leaved water parsnep; *sium angustifolium*, or *berula officinalis*; and the *sium nodiflorum*, creeping water parsnep. The two first are those which were intended to be used in medicine, and the second particularly, is that which tradition has so strongly recommended as an *antiscorbutic*; but, as the last species is the most common, and is more easily procured, it is usually gathered for medicinal purposes, instead of the other. The mistake is perhaps of no consequence, as it appears to be innocent. The roots of the first kind are, on good authority, said to be noxious; they certainly have procured so to brutes. The juice of the two others may be drank to the quantity of a quarter of a pint, and is safe and harmless. It is perhaps however to be regretted, that the *water parsnep* should have

obtained the character of a specific with many people, in what are called scorbutic cases; since it has occasioned such fatal errors, from mistaking for it, not only the *hemlock dropwort*, but the *long-leaved water hemlock* in many instances, and since also it may justly be doubted, whether the virtue attributed to *water parsnep*, as an *antiscorbutic*, does not rest, howsoever sanctioned by time, on a very slender foundation; it probably extends no farther than may be owing to its gently diuretic quality, and the power of correcting a putrid tendency in the animal frame in common with most other vegetable productions."

(An account of the poisonous effects of the *Oenanthe Crocata*, or Hemlock Dropwort; by Richard Pulteney, M.D.F.R.S. physician at Blandford. Communicated in a letter to Maxwell Garthsore, M.D.F.R.S. & S.A. and by him to Dr. Simmons. The London Medical Journal vol. 5, London 1785, p. 193-197)

L'Oenanthe safranée - P. Bloc

"La grande famille des Ombellifères est une des plus naturelles du règne végétal. A côté des poisons les plus violents, se trouvent les plantes les plus utiles à l'homme, des aliments.

Elle fournit à la médecine des gommés résines (*Assa foetida*, gomme ammoniacque, opopanax, *sagapenum*, *galbanum*, le thapsia, etc.), puis l'anis, l'angélique, l'âche, le cerfeuil, la coriandre, le fenouil, le carvi, le cumin, l'aneth, etc.; comme poisons, les quatre espèces principales de Ciguës (grande ciguë, ciguë vireuse, petite ciguë et ciguë aquatique), l'Oenanthe et ses espèces ; comme aliment, le céleri, le panais, la carotte, le persil, etc.

A côté de ces plantes, qui sont pour l'homme d'un usage continu, soit comme médicaments, soit comme aliments, il s'en trouve malheureusement d'autres dont les propriétés toxiques amènent trop souvent de funestes méprises : telles sont la ciguë, et une autre plante moins connue et sur laquelle nous désirons attirer d'une manière toute spéciale l'attention : l'*Oenanthe safranée* ou *Oenanthe crocata*.

Le genre *Oenanthe* fait partie de la sous-famille des Orthospermées et de la tribu des Sésélinées (Lamarck). Son nom d'*Oenanthe* vient de *Οινη*, vigne, et *άνθος*, fleur, parce que, d'après Pline, une plante dans laquelle on a pu reconnaître une de ses espèces a les fleurs présentant tout à fait l'odeur de la vigne. Dans le genre *Oenanthe*, l'involucre peut être tout à fait nul ou composé de une à deux folioles ; le calice est à cinq dents peu marquées.

Les fleurs du centre de l'ombelle sont sessiles et stériles, à pétales cordiformes, presque égaux. Les fleurs de la circonférence sont très-grandes et irrégulières.

Le fruit est strié, tubéreux, cortiqueux à côtes aiguës ou obtuses, couronné par les dents du calice et par le pistil.

Les *Oenantes* sont des herbes aquatiques, glabres, à ombelles composées, à involucre variable, souvent nul, à involucelles polyphylles, à fleurs blanches, fixées sur de longs pédicelles, insérées sur le rayon de l'ombellule, hermaphrodites et stériles par avortement. Ces végétaux croissent abondamment dans les contrées boréales de l'ancien continent.

Quelques-uns ont été observés en Amérique.

Ce genre renferme de très-nombreuses espèces, et tel qu'il est aujourd'hui limité, on en compte encore une vingtaine qui ont été réparties en deux grandes sections, et que certains auteurs admettent comme genres distincts."

Oenanthe crocata, Oenanthe safranée, Oenanthe à suc jaune.

"En anglais, *five finger'd root* (racine à cinq doigts). En Écosse, on lui donne le nom de *Cous foot* (pied de vache). En allemand, *Wasser Schierling* (ciguë aquatique). En corse, *Occhio grizo* (œil gris, bouton gris). En Bretagne, dans le dialecte de Léon (Finistère), *Kéguis*, *pembis*, *pempès*, *pembès* (racine à cinq doigts); à Nantes, on lui donne le nom de *Pensacre*, de *Navet du diable*, *d'Annicot*, *d'Abrenotte*, etc.

Cette espèce est la plus vénéneuse du genre *Oenanthe*. Elle se distingue par la conformation de ses racines, qui sont grosses, tuberculeuses : de prime abord on les prendrait facilement pour une botte de raves ou une racine de dahlia. Le nombre des tubercules qui composent cette racine varie beaucoup entre cinq, sept et quelquefois neuf; en général, ils ne dépassent pas ce nombre.

Si la racine varie par le nombre de ses tubercules, elle varie aussi par leur coloration.

Il y a deux variétés d'*Oenanthe crocata* : l'une, qui est l'espèce, a ses tubercules blancs à l'extérieur, et l'autre, qui est la variété, les a rouge-brun avec des stries longitudinales plus foncées. On peut facilement reconnaître la variété de l'espèce sans déterrer la plante. En effet, l'espèce a les feuilles d'un vert uniforme, et les pointes ne diffèrent pas de coloration ; tandis que dans la variété, l'extrémité et le bord des feuilles sont bordés d'une teinte purpurine, teinte qui est beaucoup plus prononcée aux nervures des feuilles et surtout à la base du plan. L'échantillon du Jardin botanique de Montpellier appartient à la variété. L'*Oenanthe* espèce, c'est-à-dire celle dont les racines sont blanches, présente bien quelquefois à sa base cette teinte purpurine, mais elle est beaucoup moins marquée, manque très-souvent, ou quand elle existe ne paraît qu'à la base des feuilles radicales et jamais sur les feuilles ou à l'extrémité de ces dernières.

Lorsque l'on prend une racine d'*Oenanthe crocata*, soit l'espèce ou la variété, et qu'on la coupe horizontalement, on ne tarde pas à voir, au milieu d'une chair d'un beau blanc, une série de petits points jaunâtres disposés circulairement. Ces points, qui d'abord présentaient une coloration pâle, ne tardent pas à en prendre une de plus en plus intense, et dans la variété rouge elle devient d'une teinte safranée, beaucoup plus foncée que dans l'espèce blanche. C'est cette coloration qui a valu à cette espèce le nom de *crocata* (*crocus*, safran), couleur jaune safran, safranée, à suc jaune. Toutefois, ce suc jaune ne se rencontre pas toujours dans l'*Oe. crocata*, soit qu'il ne se forme que dans un âge plus avancé de la plante, soit qu'il ne se sécrète que dans certaines localités. Suivant MM. Mérat et de Lens, ce n'est que lorsque la plante est adulte et qu'elle croît dans un sol humide et profond. Quoi qu'il en soit, cette racine ne paraît pas moins vénéneuse, qu'elle contienne ou non ce suc jaune. Dans les racines que nous avons recueillies au Jardin botanique, grâce à l'obligeance de M. le professeur Martins, ce suc était en grande abondance et se concrétait très-rapidement, offrant un aspect résineux très-marqué. Nous reviendrons sur ce sujet au chapitre consacré aux analyses de la plante.

Quand les racines sont jeunes, elles ressemblent, surtout dans la variété rouge, à de gros radis, ce qui a causé tant de méprises déplorables.

Ces tubercules exhalent une odeur forte et d'autant plus désagréable que la plante est plus fraîche; au bout d'un mois, l'odeur a presque disparu. « Quand on se trouve, dit M. Gayet », dans une prairie où croissent généralement ces végétaux, l'odorat est désagréablement affecté par cette odeur nauséuse, car les feuilles elles-mêmes l'ont à un point très-développé, et quand on les froisse dans les doigts elles laissent une odeur difficile à faire disparaître.»

Le nombre des tubercules varie entre six et neuf; ils varient aussi de grosseur : l'espèce à racine blanche les a beaucoup plus grosses, plus longues et plus régulières que la variété à racine rouge : cette dernière est généralement moins renflée, mais présente une quantité de suc jaune beaucoup plus grande que l'autre, et pour cette raison je la crois plus vénéneuse que la variété blanche ; son odeur est aussi beaucoup plus forte.

Quand la plante est jeune, elle a tout à fait le port du persil, la même coloration, et il est fort difficile de dire si c'est de l'*Oenanthe* ou du persil que l'on a devant soi : son odeur caractéristique la fait reconnaître; ses feuilles sont aussi plus larges et plus découpées et ne présentent pas de points blanchâtres à leur extrémité, comme on le remarque facilement dans le persil. Quand la plante grandit, elle se rapproche un peu de la grande ciguë; puis, lorsque sa

croissance est terminée , elle a une certaine analogie avec le céleri. Elle diffère de la ciguë par ses feuilles d'un vert plus clair et plus découpées, par sa tige cannelée d'un vert foncé ou d'un vert sale, plus ou moins rouge, ou de teinte carminée à sa base et surtout aux nœuds inférieurs, suivant la variété d'Oenanthe.

Les tiges, d'après M. Gayet, présenteraient un suc jaune; nous n'en avons jamais constaté la présence sur aucune des deux espèces, mais nous ne mettons pas son assertion en doute, car ce suc ne se trouve pas, dit-il, dans tous les plants : la nature du sol, du pays, l'humidité ou la sécheresse, influent beaucoup sur sa production.

L'Oenanthe crocata présente dans l'espèce blanche, qui est la plus commune, une tige de huit à dix centimètres de circonférence à sa base et quelquefois davantage.

Dans la variété rouge, la tige est plus grêle et ne présente guère que six à huit centimètres, mais elle est beaucoup plus cannelée.

Dans les deux variétés, elle atteint en hauteur 1 mètre à 1^m, 20 ; parfois elle peut aller jusqu'à deux mètres.

Le port de la plante est très-beau. La tige est glabre, rameuse, cannelée.

Les feuilles sont vertes, deux fois ailées, à folioles sessiles, cunéiformes, incisées au sommet.

Les tiges et les feuilles se dessèchent et disparaissent chaque année après la maturité des graines.

Les racines et le collet sont les seuls organes qui persistent jusqu'au printemps suivant.

Les fleurs sont blanches généralement, quelquefois elles affectent une coloration rosée.

Le calice est à cinq dents peu marquées ; la corolle est à cinq pétales cordiformes presque égaux : pourtant les pétales des fleurs de la circonférence sont plus longs que ceux de l'intérieur de l'ombellule.

Les étamines sont au nombre de cinq ; les filets sont longs et déliés, et terminés par une anthère d'une couleur purpurine et qui s'ouvre par une fente.

Le fruit est oblong et couronné par le calice.

L'involucre et l'involucelle sont composés par un nombre variable de bractées; le plus ordinairement on en trouve trois à cinq, longues et grêles."

(P. Bloc, Étude toxicologique et médicale sur l'Oenanthe safranée (*Oenanthe crocata*), Paris 1873, p. 7-8, 12-15)

The confusion of *Oenanthe crocata* with *Cicuta virosa* - William Watson

"*Wepfer* has confounded his *Cicuta aquatica*, in the history thereof, with the poisonous *Oenanthe* of *Lobel*; where he says, that *Lobel* had described the *Cicuta aquatica* under the Name of *Oenanthe Cicutae facie, succo viroso crocante*; and mentions, that it is not very frequent, but in the Northern Parts of *England* by the Sides of Rivers, and in watry Places: He adds, that *Lobel* has not been exact in his Description. To which I answer, that *Lobel*'s Description of the *Oenanthe* is very exact, for the Time he liv'd; and it is very evident, that *Wepfer* never saw this *Oenanthe*; which Plant, I believe, is not found in *Germany*. *Wepfer* likewise, in the *Ephemerides Naturae Curiosorum*, is under the same Mistake; and tells you, that *Stalpart van der Wiel* differs from him; and calls the Plant, mention'd in his Observations, *Oenanthe*, as *Lobel* does: And tho' *Stalpart* has given Figures of the Plant accurate enough for a common Observer to distinguish the Plants by, and tho' nine Years lapsed between the Publication of his Book *de Cicuta* and his Observations in the *Ephemerides*, he was still in the same Error; and believed the *Oenanthe* of *Lobel*, and his *Cicuta aquatica*, as well as that of *Gesner*, to be the same poisonous Plant. The accurate

Hoffman also, when treating of vegetable Poisons, makes no Mention of this Difference.

Neither the Roots of the *Oenanthe* of *Lobel*, nor those of the *Cicuta* of *Wepfner*, have any Flavour in them disagreeable enough to deter those, who taste them, from eating. They both occasion violent Convulsions, and Death, if not timely prevented. The Intention of Cure seems in both to be the same; viz. first, by emptying the Stomach and Intestines as soon as possible, and then by causing the Patient to swallow large Quantities of oleaginous Fluids. But it is to be observed, that the causing the Patient to swallow any Quantity is attended with great Difficulty, after he is attacked by the Poison; because of the Jaws being, as it were, locked together by the Violence of the Spasm. After the Stomach is freed from this pernicious Vegetable, the Symptoms have generally diminished by Degrees, and the Patient recovered.

Threkheld, in his *Synopsis Plantarum*, mentions, that he has seen great Plenty of this *Oenanthe* in *Cumberland*, where the Country People call it *Dead Tongue*, and use it, when boiled like a Poultice, to the galled Backs of their Horses.

Neither the *German* Botanists, nor *Haller* in his *Enumeratio Stirpium Helveticae*, mention this Plant as growing amongst them. I believe, therefore, it is seldom met with but in *Holland*, *England*, and in some Parts of *France*; for *Morrison* mentions it growing in *Bretagne* near the Mouth of the River *Loire*. This Plant was communicated to *Matthiolus* by a Professor of Physic at *Padua* (See *Matth.* p.628). *Linnaeus*, in the *Flora Suecica*, says, that he received it from a Correspondent, who gather'd it in *Scania*.

Lobel, and after him *John Bauhin* and others, take notice of this Plant's growing in the Northern Parts of *England*. It grows also in the Western and Southern Parts, by the Sides of Rivers, large Waters, and sometimes by Ponds. It grows near *Bath*. Dr. *Allen* mentions it growing within three Miles of *Bridgewater*. Its being produced in *Wales*, is the Occasion of this Paper. I have seen it very frequently by the Sides of the River *Thames*, both above and below *London*. I have found it likewise by the Side of a large Pond near the Road, in the Town of *Dulwich*, not far North of the College; likewise by the Sides of a large Water near the Mills, half a Mile South-east of *Dartford* in *Kent*.

Lobel is the first, who has given a small Figure and a tolerable Description of this *Oenanthe*, in his *Adversaria Plantarum* (nov. 326). He has likewise represented it in the 730th of his *Icones*. This seems likewise to be the Plant described by *Valerius Cordius* (p.149) under the name of *Olsenichium*; and, by *Dodonaeus*, under that of *Apium sylvestre, sive Thysselicum* (Pempt. 687); where the Description, Place of Growth, and Form of the Roots, agree exactly with the Plant under Consideration; tho' his Figure is execrably bad. This bad Figure is copied, and the Description translated, by *Gerard* (Emac. 1020) in his Herbal, without making any mention of *Dodonaeus*. This Figure is likewise copied in *Parkinson's* Theatre of Plants. *John Bauhin*, *Matthiolus*, *Gerard*, *Parkinson*, and *Morrison*, have given us Figures of this *Oenanthe*; but these Representations give us scarcely any other Idea of the Plant, than that it is an umbelliferous one, with Roots divided like those of *Asphodel*. Of these, however, *Morrison's* is the best; and his Description, in his Book *de Umbelliferis*, is very exact and copious. Mr. *Ray's* Description is taken from *Lobel*. I have at the Bottom of the Page recited the various *Synonyma*, under which this Plant is mentioned amongst Authors. [p. 235]

As it appears, from what I have laid down, that the *Oenanthe* of *Lobel*, and *Cicuta aquatica* of *Wepfer*, have not been sufficiently distinguished by medical Writers hitherto, I hope I shall stand excused for making a few Observations upon this last. This, though a Plant frequently met with upon the Continent, and very well described by botanical Writers, we seldom find near *London*; but it grows in many Parts of *England* by the Sides of large standing Pools, and near the Banks of *Fens*. I am informed by *Robert More*, Esq.; an excellent Botanist, and a very worthy Member of this Society, that it grows plentifully, in many Parts of *Shropshire*. I have lately received it from Dr. *Wilmer*, who gather'd it by the Sides of the River *Colne*, not

far from *Uxbridge*. It is mentioned by Mr. *Ray* to grow near *Brereton Mere* in *Cheshire*, and in several other Places. You find it mention'd by *Gesner* (Hort. 254); and *Wepfer*, in his History thereof, has given us four Tables of different Parts sufficiently accurate. It is figured and described by *John Bauhin* (III. p.175). *Lobel's Icon* 208, relates to this Plant.

Dodonaeus's Figure, which is not a bad one for the Time, is copied both by *Gerard* and *Parkinson*. *Morrison* has given us two Figures thereof, one in his general History, the other in his Book *de Umbelliferis*, though under different Names. But the most elegant and descriptive Figures are those of the *Hortus Eystettensis* and *Rivinius*. As the *Synonyma* of this Plant are very many, and very different, I have inserted them at the Bottom of the next Page. [p. 237]

Tho' the medical Writers have not sufficiently distinguished these Plants, the Botanists have. These indeed, in their turns, have been as negligent, when writing concerning their Uses. So that, notwithstanding *Lobel* long ago (*Adversaria*, 1572) informed the World, that the *Oenanthe Cicutae facie*, in its Effects, was very like Hemlock; and that those, who had eaten it in Sallads, were almost killed by it; this Plant occasioning *Vertigo's*, and other violent Symptoms; yet *Morrison*, in his Treatise of umbelliferous Plants, tho' very exact in the Description of the Species of which we are now treating, recommends indiscriminately the whole Genus, as being temperately warm and dry; that they are useful in cleansing the urinary Passage, and in opening Obstructions: He quotes the Authority of *Dioscorides* for giving the powder'd Roots in Wine to cure the Dysury, and to help asthmatic Complaints. What the *Oenanthe* of *Dioscorides* was (lib. iii. cap. 135), nobody has determined. He describes it, as having Leaves like Parsneps, white Flowers, a thick Stalk about a Span high, Seeds like those of Arrach, a large Root divided into several round Heads, and that it grows in rocky Places. A short Account of the *Oenanthes*, together with its Uses in Medicine, is taken from *Dioscorides* by *Pliny* (*Nat. Hist.* lib. xxi. cap. 24) the Naturalist. What the Plant was that *Dioscorides* here recommends, is uncertain: None of the Species we are acquainted with come near this Description; all those, that we know, much exceed his Measure; none of them have Leaves like Parsneps, and all grow in watry Places. *Ruellius* (p.265), *Fuchsius* (Hist.p.563), *Tragus* (p.883), *Dodonaeus* (Pempt. 56), and *Matthiolus* (p.627), have given us the *Filipendula* or *Dropwort*, for the *Oenanthe* of *Dioscorides*: But this cannot be that Plant, because its Seeds are not like those of Arrach; neither has it a large Root divided into many Heads. *Parkinson* (*Theat.* 895), no great Favourer of *Lobel*, says, that "*Lobel* only brandeth his *Oenanthe Cicutae facie* to be virulent and venomous, from the Relations of the North Country People, where he says it chiefly grows." Mr. *Ray*, in his History, though he has transcribed *Lobel's* Description, in which its venomous Qualities are taken notice of, leaves this Matter to further Examination, other Botanists being of a different Opinion.

The Instances mention'd in these Papers are but too sufficient Testimonies of the malignant Properties of this Plant; but Mr. *Miller*, a worthy member of this Society, informed me further, that, not many Years since, a whole Family were poisoned therewith at *Battersea*. As this Plant is frequent so near us, and as its Appearances and Smell are so like *Smallage* and *Celeri*, we are greatly interested that the Knowledge of it be extended as much as possible. As I find no good Representation thereof among Authors, and as a good Figure conveys a stronger Idea to the Generality of Readers than the most accurate Description, I have procured that admirable Artist Mr. *Ehret* to draw not only this Plant, but also the *Cicuta Aquatica* of *Wepfer*; that they may be the more easily known from all Plants, and distinguished from each other by their being both seen at one View."

P.S. I am informed by Mr. *Ehret*, that, in drawing the *Oenanthe*, which he has executed with his usual Elegance and Accuracy, he was obliged to have a Quantity of it placed before him upon a Table; when, the Room being small, the *Effluvia* thereof caused in him a universal Uneasiness, with a *Vertigo*; so that he was constrained to have it removed, and never after place before him but a small Piece at a time."

(Critical Observations concerning the *Oenanthe aquatica*, succo viroso crocante of Lobel, by Mr. William Watson, Apothecary, F.R.S.; occasion'd by an Extract of a Letter from Mr. George Howell, Surgeon, at Haverfordwest, to the Author, giving an Account of the poisonous Effects of this Plant to some French Prisoners at Pembroke, in: Philosophical Transactions, vol. 44, London 1746, p. 231-240)

Frühere Erfahrungen / Former Experiences



Übersicht

1746 - On popular uses in England - William Watson

1772 - A man took the juice of the root for an inveterate scaly eruption - Richard Pulteney

1821 - De la substitution de l'oënanthe crocata à la ciguë par les pharmaciens, et de l'emploi populaire pour guérir les hémorrhoides - M. Godefroy

1830 - Emploi de la racine d'oënanthe safranée contre les hémorrhoides - Cormerais et Pihan-Dufeillay

1847 - On the medical use of *Oënanthe crocata* - William Pickells

1900 - On popular uses in the south of Ireland - Edward D. Griffin

1746 - On popular uses in England - William Watson

"The *Oënanthe aquatica cicutaë facie* of Lobel, which grows in great Plenty all over this Country, is called by the Inhabitants *five finger's Root*, and is much used by them in Cataplasms for the Fellon, or worst Kind of Whitflow."

"*Threkheld*, in his *Synopsis Plantarum*, mentions, that he has seen great Plenty of this *Oënanthe* in *Cumberland*, where the Country People call it *Dead Tongue*, and use it, when boiled like a Poultice, to the galled Backs of their Horses."

(Critical Observations concerning the *Oënanthe aquatica, succo viroso crocante* of Lobel, by Mr. William Watson, Apothecary, F.R.S.; occasion'd by an Extract of a Letter from Mr. George Howell, Surgeon, at Haverfordwest, to the Author, giving an Account of the poisonous Effects of this Plant to some French Prisoners at Pembroke, in: *Philosophical Transactions*, vol. 44, London 1746, p. 228, 233)

1772 - A man took the juice of the root for an inveterate scaly eruption - Richard Pulteney

"Dear Sir,

Some circumstances having lately come to my knowledge, relating to the effects of a poisonous plant, I thought them rather too remarkable not to merit further notice; and, I address them to you with the more propriety, as you have already laid before the publick some observations concerning the deleterious qualities of the plant in question, which holds a distinguished place among the poisonous ones that are indigenous in Britain.

Mr. H-n, an attorney of this place, now upwards of forty, at the age of fifteen, began to be affected (after taking cold upon violent exercise, as he thinks) with what is usually called a scorbutick disorder; which shewed, itself more particularly on the outsides of his arms, about the elbows, and on the outsides of his legs, from the knees to the ancles, as well as in blotches upon other parts of his body. It had the appearance of a dry branny scab or scurf, which every night fell off, more or less, in scales, as is usual in leprous cafes. At times it pushed out more than usual, and thickened the integuments of the limbs considerably, after which the separation of scales would become very abundant.

For several years past he had been trying a variety of things commonly recommended in such cases, particularly the quack medicine known by the name of Maredant's Drops, which he continued for near a twelvemonth, without finding the least sensible relief: also an electuary of *Flos fulphuris* and *Cremor tartari*, which he had persevered in for near three years, without finding any other alteration, than that of its preventing costiveness, to which he was habitually subject.

In the winter 1770, this disorder increased upon him very rapidly, without being able to assign any reason, from any accident that had happened to him, or from any irregularity of his own in point of regimen, in which he was always very exact. At this time, besides the farther spreading of the eruption itself, the integuments of the legs thickened very much, and the limbs swelled to such a degree, as to render him unable to walk. The quantity of branny scurf

and scales thrown off, at this time, was very great; he says "handfuls might have been taken out of his bed every morning."

In this unhappy situation, even loathsome to himself, it was recommended to him to take the juice of water parsnep, in the quantity of one common tablespoonful every morning, fasting, mixed with two spoonfuls of white mountain wine.

Accordingly, about the middle of January 1771, he procured a half-pint phial of what was so called, by means of the person who had recommended it, and who had assured him that he had been greatly relieved, in a similar disorder, by it.

The first spoonful he took did not begin to give any great uneasiness for two hours, but after that time, his head began to be affected in a very extraordinary manner; a violent sickness soon succeeded, and violent vomiting; and, after he was put to bed, there came on cold sweats, and a very strong and long-continued rigor, so that the people about him thought him dying for some time; but, in a few hours, all these symptoms wore off.

Such, however, had been the inveteracy of his disorder, and so strong his desire to find relief, that he determined not to desist; and, after having omitted his medicine for one day, he repeated it, in nearly the same dose, and with similar effects as to sickness and vomiting, though the uncommon sensation in his head, and the succeeding rigor, were by no means so violent. He had resolution enough to continue this dose every other morning, for more than a fortnight, and then reduced it to three teaspoonfulls which was just the half of the first dose.

Before he had taken this juice one month, he was sensible of a very great change for the better; encouraged, therefore, by these appearances he persevered in its use until the middle of April, by which time his skin, though not quite cleared, yet had ceased to throw off any more scurf, was become soft, clean, and well conditioned, and, as he has repeatedly assured me, he got then into a much better conditioned state, than he had experienced for many years before.

From first to last, this juice never purged him; though he says, even in its reduced dose, it never failed to occasion a dizziness of the head, a nausea, and sickness, which were not infrequently succeeded by a vomiting, that always instantly relieved his head.

From the middle of April to the middle of June, he desisted from the use of the juice, but, in its stead, drank every morning for breakfast, the infusion of the leaves of the same plant, which, he says, is like common bohea tea. The infusion seldom occasioned nausea, or sickness, but always brought on a small degree of vertigo, and in a slight manner produced the effects of intoxication from liquor.

In June he went to Harrowgate, as he had designed in the summer before. Upon first drinking and bathing there, he thought himself worse; and his eruptions, having gradually increased during the two months that he staid in that place, he was convinced that those waters were of no real service to him. On his coming home, he returned to the use of the infusion, and he assures me, that he again found, even by that weak preparation, a very speedy alteration for the better. From that time, he continued it ever since, until his stock of the herb was exhausted; his skin is now so very little affected, that he has but here and there, upon his arms and legs, a very small appearance of his disorder.

Upon questioning him relating to the sensible qualities of this. medicine, he says again, that he particularly remembers that it never once purged him; not even the first dose, which had so nearly poisoned him. He does not think that it increased the sensible perspiration, but is convinced that it was diuretick; and adds, that he thinks it occasioned, besides the increased flow of urine, a copious sediment in it, and which he believes was always wanting before.

This is the plain, narrative of the fact. He has assured me that no medicine or regimen, among the great variety that he has tried, ever had any sensible effect upon his disorder before; and

that nothing but the very early and sensible relief he experienced from this juice, could have induced him to persevere in its use, under such uneasy feelings, as it never failed to produce. Indeed, he makes nothing of the lighter effects of the infusion, from which, however, he thinks, he has likewise reaped no small benefit.

This case, the nature and inveteracy of his disorder, being well known among his neighbours, was much talked of, and raised the curiosity of many people. When I first heard of it, and was informed of the smallness of the dose, and its virulent operation, I could scarce doubt that the juice of some other plant had been administered instead of that of the water parsnep, which we know to be a safe and harmless vegetable; medical writers having directed its juice to be drunk, even to the quantity of four ounces for a dose: and as I know, the *Oenanthe crocata*, hemlock dropwort, to be exceedingly plentiful in this country, so much, as to be more easily procured than the water parsnep itself; I thought it probable that that plant had been used in its stead. Upon getting a specimen, it appeared that this had been indeed the case; as also, upon farther enquiry, that it was the juice of the root only, and not of the leaves and stalks, that had been administered. I might here observe, that the expression from the root is not to be depended upon after the plant is advanced towards its flowering state, as the root then becomes light, spongy, and almost destitute of juice.

If you judge this case not improper to be laid before the Royal Society, you will do me the honour of presenting it. Mr. H-n himself is so much convinced of the efficacy of the medicine, that he is desirous of its being known to the world.

I do not enter into any reasoning on this occurrence; I relate it only as a fact, and desire it may have no more weight than every judicious physician knows is due to a single instance. How far it may be proper to give this juice a farther trial, I will not take upon me to determine; but must, as an encouragement to any who may choose to venture upon it, inform them, that it has not on all persons so much power in producing nausea and sickness, as in the case here before us. I am,

S I R, with great esteem, Your obliged humble servant,

R. Pulteney"

(A Letter from Richard Pulteney, M. D. F. R. S. to William Watson, M. D. F. R. S. concerning the medicinal Effects of a poisonous Plant exhibited instead the Water Parsnep, Philosophical Transactions vol. 62, London 1772, p. 464-474)

1821 - De la substitution de l'oenanthe crocata à la ciguë par les pharmaciens, et de l'emploi populaire pour guérir les hémorrhoides - M. Godefroy

"Dans un ouvrage imprimé en 1821, intitulé *Manuel des pharmaciens et droguistes*, traduit de la dernière édition de Ch. Ebermayer, par M. Kapeler, docteur médecin, et M. Caventou, membre de notre société, on trouve page 193, troisième alinéa, la proposition suivante:

"On mêle encore la ciguë, le phellandrium aquaticum, ou ciguë aquatique; l'oenanthe fistulosa, l'oenanthe crocata." L'auteur et les traducteurs se contentent d'indiquer la sophistication, et ne signalent pas la différence des effets que peuvent produire les plantes substituées à la ciguë. Comme le hasard m'a fourni l'occasion de connaître le danger qui pourrait résulter de la substitution de l'oenanthe crocata à la ciguë, je crois qu'il est de mon devoir de mettre les praticiens en garde contre cette substitution, et de les prévenir contre les accidens qui suivaient l'emploi de ce végétal. L'oenanthe crocata a absolument le port de la grande ciguë, *conium maculatum*. Les feuilles sont du même vert foncé, parsemées de taches purpurines, et à moins que la plante ne soit garnie de ses graines on les confond aisément; cependant on peut les distinguer en déchirant la plante; l'oenanthe rend un suc d'abord laiteux qui jaunit promptement à l'air; ce suc a une odeur désagréable, et appliqué sur la peau il est rubéifiant, il a une saveur âcre. Lémery dit de cette plante: "C'est un poison mortel; si on a eu le malheur d'en avaler, il cause dans le ventricule une ardeur très-douloureuse, il fait tomber

dans des convulsions fortes, etc." (...)

D'après ces faits ^[1] il est évident qu'il serait très-dangereux de substituer cette plante à la ciguë vireuse surtout pour la préparation de l'extrait. Cet extrait s'employant souvent à une dose assez forte, s'il était préparé avec le suc de l'oënanthe crocata, il causerait infailliblement la mort du malade.

Nota. La racine de cette plante s'emploie dans le département de la Loire-Inférieure pour guérir les hémorroïdes: pour cela on l'applique râpée sur les hémorroïdes et pour prévenir leur retour on en suspend un morceau en amulette au bas des reins. C'est un remède populaire; elle est appelée par les gens du pays *pin pin* ou *pain pain*."

[1] Empoisonnement de trois marins, p. 171-172

(Notice sur l'Oënanthe crocata, par M. Godefroy, pharmacien à Paris, Journal de pharmacie et des sciences accessoires, tome 8, Paris 1822, p. 170-172)

1830 - Emploi de la racine d'oënanthe safranée contre les hémorroïdes - Cormerais et Pihan-Dufeillay

"Les habitans des campagnes, ainsi que les empyriques, emploient souvent, en diverses provinces, les racines de cette plante pour guérir les tumeurs hémorroïdales externes: elles produisent toujours chez ceux qui en font usage une éruption abondante sur les fesses et à la marge de l'anus, éruption accompagnée de cuisson et de démangeaison très-fortes.

Ce moyen, qui réussit quelquefois, mais qui aussi exaspère fréquemment les souffrances des malades, et leur fait courir de graves dangers, pourrait peut-être devenir utile entre les mains d'un praticien éclairé.

Quoi qu'il en soit, ceux qui emploient ce remède le préparent en écrasant les racines pour en faire des cataplasmes qu'ils appliquent sur leurs tumeurs. Quelques-uns les font bouillir dans un peu d'eau, et font alors avec cette eau des fomentations sur leurs hémorroïdes. S'il survenait une inflammation trop forte, il faudrait promptement recourir aux saignées générales et locales, et à toute la série des antiphlogistiques.

Les médecins n'ont probablement jamais conseillé l'emploi de cette racine; mais beaucoup de personnes qui en ont fait usage se sont, par son moyen, débarrassées d'hémorroïdes plus ou moins anciennes.

La guérison est due sans doute à la révulsion énergique que produit l'éruption qui a lieu à la peau; peut-être aussi tient-elle un changement du mode d'irritation dans le tumeur. Les causes qui donnent lieu aux hémorroïdes étant moins communes parmi les habitans des campagnes, la guérison qu'ils obtiennent à l'aide de ces racines est ordinairement durable.

D'après les effets prompt et certains de la résine que contiennent les racines de l'oënanthe safranée, ne serait-on pas fondé à en proposer la dissolution alcoolique pour produire sur la peau une rubéfaction énergique et durable, dans les cas où l'on ne voudrait pas déterminer de phlyctènes, ou dans ceux où il serait nécessaire de rappeler à la peau une affection dartreuse, érysipélateuse ou psorique, dont la disparition et la métastase sur les organes intérieurs causent si souvent des accidens mortels? Quelques frictions faites sous la surveillance d'un médecin suffiraient pour produire un résultat que peu de topiques irritans ont le pouvoir d'amener, surtout dans les substances végétales."

(Examen chimique et toxicologique des racines de l'oënanthe safranée (oënanthe crocata, Linn.); par MM. Cormerais et Pihan-Dufeillay, Journal de chimie médicale, 1^e série, tome 6 (1830), p.469-471)

1847 - On the medical use of *Oenanthe crocata* - William Pickells

"The root wrapped in a cabbage leaf, roasted in the ashes, and then applied, is much used by the poorer classes as a discutient ^[1] for tumours."

"Virulent a poison, as is the *Oenanthe crocata*, it is not, however, in judicious hands, without its medical value, at least in cutaneous affections, hemlock, of one species or the other, having from remote antiquity been celebrated as emphatically "the skin curer." Mason Good recommends it in the cure of leprosy. It is also recommended in ichthyosis. Bell says it is a specific for cancer. I have heard of its being given in drops for the cure of chincough. Gray in his Supplement to the Pharmacopoeias mentions several uses of poultices of the *Oenanthe crocata*. We have before adverted to the use of the root roasted, by the poorer classes in this place as a poultice to tumours. Its use, however, in this way appears to be very indiscriminate and incautious. I have prevented a boy whom I saw gathering the root for a poultice for "a fresh cut." A physician attached to a country dispensary near this city informed me, that a woman in his district applied to a scrofulous ophthalmia with opacity of cornea, a poultice of the *Oenanthe crocata*, which irritated and inflamed the eye most dreadfully, causing the other eye also to swell and inflame. He afterwards applied a poultice of the *Conium maculatum*, which, however, appeared to exert little effect. Hemlock, so far back as the time of Pliny, was supposed "smeared around to restrain pains of the eyes" (cohibere oculorum dolores circumlitus.) It was also mixed with collyria. Given internally in large doses, the *Oenanthe crocata* produces fatal tetanus, as in the instance which occurred in England, related by Watson in the Philosophical Transactions. Though in the following instance, which occurred some years since in Galway, the root is called by the unknown name "cow's foot," there can be little doubt, from the great reputation of the plant among the vulgar in the cure of obstinate cutaneous diseases of all sorts, that it was the *Oenanthe crocata*." (...)

(Deleterious effects of the *Oenanthe Crocata* or Hemlock Water Dropwort, exemplified in a number of instances, as it occurs in the South of Ireland, more particularly in the neighbourhood of Cork. By William Pickells, A. B., M. D. The Edinburgh Medical and Surgical Journal, vol.67 (1847), p. 438, 445-446)

[1] discutient = ein zerteilendes Mittel]

1900 - On popular uses in the south of Ireland - Edward D. Griffin

"This plant grows in great abundance in marshy places and by the banks of sluggish streams in the south of Ireland, and country people use it for poulticing boils, carbuncles, and other inflammatory swellings."

(Edward D. Griffin, M.D., Killarney District Lunatic Asylum, Poisoning by Water Parsnip (*Oenanthe crocata*), The British Medical Journal March 2, 1900, p. 509)

Vergiftungen / Poisonings



Übersicht

I. Einzelne Vergiftungsberichte / Cases of Poisonings

- 1699 - Eight young lads ate the roots ignorantly mistaking it for Sium aquaticum roots - Francis Vaughan
1733 - Four children found "carrots" by the side of a rivulet - John Allen
1746 - Eleven French prisoners at Pembroke ate of the roots which they took to be wild Celeri - George Howell
1758 - Empoisonnement de trente-sept soldats qui avaient mangé de la racine d'Oenanthe - M. Rochard
1759 - A cabinet-maker drank the juice of Oenanthe crocata instead of Water Parsnep against a scorbutic disorder - William Watson
1763 - Dix-sept soldats à la citadelle d' Ajaccio en l' Isle de Corse étaient empoisonnés par une bonne soupe - M. Vacher
1782 - A boy nine years old at Liverpool ate the root of hemlock-dropwort - Thomas Houlston
1785 - A poor woman at Blandford drank by mistake the juice of the root of Hemlock Dropwort - Richard Pulteney
1797 - A young woman took by mistake the juice of the root of hemlock dropwort for an eruption in her face - Robert Graves
1830 - Des effets chez un experimenteur qui avait râpé et touché les racines long-temps avec les mains nues - Cormerais et Pihan-Dufeillay
1833 - A young dairy maid ate deliberately a piece of the root of Oenanthe crocata - Joseph Froyssell
1836 - Effects on a man who was employed to crush the plant and on a man who ate a morsel of the root - A. T. Thomson
1836 - Une famille de cinq personnes se frottèrent le corps avec l' oenanthe safranée contre la gale - A. Chevalier
1844 - Several convicts at Woolwich ate the roots which they mistook for celery - P. Bossey
1845 - Un meunier avait inculpé sa femme d' avoir tenter de lui empoisonner à l' aide de la racine de l' oenanthe crocata - M. Toulmouche
1847 - The deleterious effects of the Oenanthe Crocata, exemplified in a number of instances, as it occurs in the South of Ireland - William Pickells
1857 - Two laborers at West Boldon ate some of the root - Alfred S. Taylor
1858 - The crew of a ship had eaten of the roots which they had found ashore - Robert Grahame
1865 - Five boys at Cork ate the roots with avidity mistaking it for field carrots - John Popham
1873 - Les effets de la racine sur la peau et les muqueuses - M. Gayet et P. Bloc
1873 - Poisoning of a herd of oxen in the county of Limerick - Charles A. Cameron
1873 - L' action toxique de l' Oenanthe safranée sur les animaux - P. Bloc
1876 - Nine children ate of a root which a fisherman had found - R. W. Foss
1891 - A girl aged nine have eaten portions of the plant - F. N. Williams
1900 - Two inhabitants of a lunatic asylum ate of the root - Edward D. Griffin
1937 - Poisoning of two children who had eaten the leaves and root - W. E. Thomas
1987 - Accidental poisoning of four adults from eating a soup made from a wild plant - P. Fitzgerald et al.
1987 - A young couple ate a meal of duck's eggs, nettles, and the boiled leaves and roots of a plant picked on the Thames riverbank - M. J. Ball et al
2002 - A group of eight young adults on holiday made a curry from plants which they thought to be water parsnips - C. Downs et al.

II. Symptom-Register

- 1878 - The Encyclopedia of Pure Materia Medica - Timothy F. Allen

1699 - Eight young lads ate the roots ignorantly mistaking it for *Sium aquaticum* roots - Francis Vaughan

"I Shall now communicate to you, a Story of Two of the direful Effects of *Oenanthe aquatica*, *Cicutae facie succo Viroso* of *Lobel*, which we may English *Hemlock-Water-Dropwort*, upon several Persons that eat of the Roots of it, sent to me not long since in a Letter from Dr. *Francis Vaughan*, a Learned Physician in *Ireland*, living at *Clonmell*, in the County of *Tipperary*. This Gentleman observing me, notwithstanding what Dr. *Johnson* in his *Gerardus emaculatus*, and *Lobel* in his *Adversaria* had written of the venenose Quality of this Plant, to be somewhat doubtful of it in my *Synopsis Methodica Stirpium Britannicarum*, for my full Satisfaction and Conviction, wrote the following Abstract of a History drawn upon a Person, who is at present his Brother-in-law, concerning the Effects of it upon himself, and Seven other Young Men, who ignorantly mistaking it for *Sium aquaticum*, or *Apium Palustre*, did eat of it.

Eight Young Lads went one Afternoon a fishing to a Brook in this Country, and there meeting with a great Parcel of *Oenanthe Aquatica succo viroso*, (in Irish *Tahow*) they mistook the Roots of it for *Sium aquaticum* Roots, and did eat a great deal of them. About four of Five Hours after going home, the Eldest of them, who was almost of Man's Stature, without the least previous appearing Disorder or Complaint, on a sudden fell down backwards, and lay kicking and sprawling on the Ground, his Countenance soon turned very Ghastly, and he foamed at the Mouth. Soon after Four more were seized the same way, and they all died before Morning, not one of them having spoken a Word from the Moment in which the venenate Particles surprised the *Genus Nervosum*. Of the other Three One ran stark Mad, but came to his right Reason again the next Morning. Another has his Hair and Nails fallen off, and the Third (who is my Brother-in-law) alone escaped without receiving any Harm: Whether he eats less of this fatal Root, or whether his Constitution which is to this Day very Athletick, occasioned it, I cannot tell. Though I am of Opinion, that his speedy running above Two Miles Home, after that he saw the first Young Man fall, together with his Drinking a very large Draught of Milk, warm from the Cow in his Mid-way, were of singular use to him For his Violent Sweating did doubtless expel and carry off many of the venenose Particles, and had a better Effect than perhaps, the best of our Alexipharmicks (which you know are generally Diaphoretick) might have produced in this Case. Besides, I believe this Draught of warm Milk did act its part, by involving the Acid or Acrimonious Poisonous Particles, and rendering them unactive, and preventing their seizing the *Genus Nervosum*, till they were expelled *per Diaphoresiu*. But this is but my Conjecture, which I willingly submit to more mature Judgements. This happened about Thirty Years ago; but there are many yet alive, who assert the Truth of it, having been Eye witnesses of this dreadful Tragedy. There was also a Dutch-man, about Two Years since, within Eight Miles of this Place, Poysoned by boyling and eating the Tops of this Plant, shred into his Pottage; he was soon after found dead in his Boat, and his little Irish Boy gave Account of the Cause of his Death, to be eating this Herb, which he forewarned his Master against, but in vain, the Dutch-man asserting, that it was good Sallade in his Country; so that I believe he took it for *Apium Palustre*, which its Leaves much resemble. Thus far Dr. *Vaughan*.

Several Parallel and no less Tragical Histories of later Date, of the miserable Destruction of divers Persons, by the eating of the Roots of this pernicious and deleterious Plant, I find recorded by *Jacobus Wepferus*, in his Book *de Noxis Cicutae aquaticae*, and in the *Miscellanea curiosa* or *Ephemerides German*. Dec. 2. An. 6. Observ. 116.

Wherefore I think it is for the Interest of Mankind that all Persons be sufficiently cautioned against venturing to eat of this, and indeed any other unknown Herb or Root, lest they incur the same Fate; and in order thereto, that such Histories be made Publick and transmitted to Posterity."

(Part of a Letter from Mr. Ray, F.R.S. to Dr. Sloane, giving an Account of the Poysonous Qualities of Hemlock-Water-Dropwort, Philosophical Transactions, vol. 20, London 1699, p. 84-86)

1733 - Four children found "carrots" by the side of a rivulet - John Allen

"About three Miles from the Place of my Abode and Practice, and seven Years since, it happened that four Children had eaten the Roots of the *Oenanthe aquatica cicutae facie*. They it seems, being dismissed from School and their A. B. C. about eleven o'clock in the Morning, strolling about the Meads met with these Roots by the Side of a Rivulet, which with a Piece of broken Candlestick, that unluckily offered itself, they dug up. Being highly delighted with the Work, and now pretty well furnished they cry one to another, what charming young *Carrots* are here! then by mutual Inducements greedily fall too, not through Hunger, but Wantonness. Well, what was the Consequence, Home they go, begin to sicken, but not a Word of the *Carrots*. These Children were three Brothers and a Sister, whose Father alone was at that time living. The youngest Boy was not yet four Years old, nor the eldest nine: The middle one about five, and the Girl six or seven. There was nothing but crying and howling, the Father amazed at the Sight of his Children can no way account for the Disorder. Not long after they were taken Speechless, seized with a Giddiness, and fell with their Faces to the Ground. Terrible Convulsions with an entire Privation of the Senses succeeded. They all cast their Stomachs, the Girl purged upwards and downwards, sometimes in lucid Intervals they eat and drank. The Father was astonished at and bemoaned with a Flood of Tears the miserable *Metamorphosis* of his Children; nor could he help giving into the vulgar Notion of Charm and Sorcery, as the Cause of these Distractions. Great enquiry is made between their Fits, when they were come a little to themselves, about what they had eaten, but nothing extraordinary was confessed. After this upon searching their Pockets were found Pieces of a certain Root, on the Discovery of which, all that could speak acknowledged they had eaten of it, and gave immediate Suspicion of Poison. Upon this a Messenger was dispatched to me with a Sample; as fortune would have it I was no stranger to what was brought. But being at that time otherwise engaged, I sent an Apothecary with proper Materials and my best Instructions, who as I imagined, found the poor Children almost expiring; now one, now another, now all together labouring under epileptick Paroxysms, with violent Convulsions and foaming Mouths. By my Directions he gave them a good deal of Oil, with large and frequent Draughts of warm Water. Having first pumped clean as it were the Stomach, I made use of my favourite Medicine on such occasions, the *Tincture Bezordica*. Depending on this I thought any other needless, and only indulged them with a little Wine in their fainting Fits. A dose of this Tincture for the Eldest was a Spoonful and half, and for each of the little ones lesser Quantities according to their Ages in a Draught of Ale; their Diet in the mean time was Broth and Milk Meats. Within twenty-four Hours two were restored to their former Health, though much weakened. More slow was the Recovery of the other two, nor was the Malignity discharged in less than five or six Days. I took care that frequent Glysters should be injected, and probably used other remedies which now escape my Memory. They all, though with great difficulty, did well; and are now at the Penning of this, living to attest it.

The same Father of those Children, a Man of Credit and Integrity, assured me, that two Years after this Accident, a Pig of his breaking forth from the Sty, got into the same Meadows, where it is reasonable to suppose he rooted up and devoured this pernicious Vegetable, for in few Hours he grew violently sick. A Pig Doctor of the Neighbourhood was sent for, who tried his utmost Skill to little purpose, for the Animal frothing and foaming at Mouth died in miserable Convulsions."

(John Allen, A Summary View of the Whole Practice of Physick, Vol. 2, London 1733, Art. 1586-1587, p. 323-325)

1746 - Eleven French prisoners at Pembroke ate of the roots which they took to be wild Celeri - George Howell

"As you desire in your Letter, I have made the best Inquiry I was capable of, concerning the melancholy Accident at Pembroke.

Eleven *French* Prisoners had the Liberty of walking in and about the Town of *Pembroke*: Three of them, being at the Fields a little before Noon, found and dug up a large Quantity of a Plant with its Roots (which they took to be wild *Celeri*) to eat with their Bread and Butter for Dinner. After washing it, while yet in the Fields, they all three eat, or rather tasted, of the Roots.

As they were entering the Town, without any previous Notice of Sickness at the Stomach or Disorder in the Head, one of them was seized with Convulsions. The other two ran home, and sent a Surgeon to him. The Surgeon endeavour'd first to bleed, and then vomit him; but those Endeavours were fruitless, and he died presently.

Ignorant yet of the Cause of their Comrades Death, and of their own Danger, they gave of these Roots to the other eight Prisoners, who all eat some of them with their Dinner. I cannot learn exactly how much they eat, they being sent away a little time before your Letter arrived.

A few Minutes after, the remaining two, who gather'd the Plants, were seized in the same manner as the first; of which one died: The other was bled, and a Vomit with great Difficulty forced down, on account of his Jaws being, as it were, locked together. This operated, and he recover'd; but was some time much affected with a Dizziness in his Head, though not sick, or in the least disorder'd in his Stomach. The other eight, being bled and vomited immediately, were soon well.

There were in these Men none of those comatose Symptoms you mention'd to have happen'd to the *Dutch* Soldiers, who were poison'd by eating the *Cicuta major*. As you suggested in your Letter, I found it to be *Oenanthe aquatica cicutae facie* of *Lobel*, which grows in great Plenty all over this Country, is called by the Inhabitants *five finger's Root*, and is much used by them in Cataplasms for the Fellon, or worst Kind of Whitflow. The *Frenchmen* eat only the Root, and none of the Leaves or Stalk. - I must beg your Pardon for sending you this imperfect Account: Had this Accident happen'd at Haverford, you should have had one more exact." (Letter from Mr. Howell)."

(Critical Observations concerning the *Oenanthe aquatica, succo viroso crocante* of *Lobel*, by Mr. W. Watson, Apothecary, F.R.S.; occasion'd by an Extract of a Letter from Mr. George Howell, Surgeon, at Haverfordwest, to the Author, giving an Account of the poisonous Effects of this Plant to some French Prisoners at Pembroke, in: *Philosophical Transactions*, vol. 44, London 1746, p. 227-229)

1758 - Empoisonnement de trente-sept soldats qui avaient mangé de la racine d'Oenanthe - M. Rochard

"Au mois de juin dernier, plusieurs soldats du régiment de Berry, infanterie, en se promenant dans les prairies de cette Isle, mangèrent de la racine d'Oenanthe, qu'ils prirent pour de la carotte; ceux qui en mangèrent les premiers furent saisis très-vivement de tous les symptômes qui accompagnent l'ingestion des poisons les plus violents, ce qui n'empêcha pas les autres de manger jusqu'à trois fois de ces racines pernicieuses. Le premier qui vint à l'hôpital avait continué longtemps sa promenade après sa promenade, et fut fort gai ; mais sur les huit heures et demie, il se sentit très-incommodé; on le transporta aussitôt à l'hôpital dans l'état le plus violent; il faisait des efforts incroyables pour vomir, et il était dans un état convulsif des plus prononcés: les yeux, la face, les mâchoires étaient si fort contractées qu'on ne put rien lui faire avaler; il mourut au bout de trois quarts d'heure, dans une véritable attaque d'épilepsie. Les

autres ne furent pas si malheureux, quoique très-tourmentés des symptômes les plus effrayants; on vint à bout de leur écarter les mâchoires, et on leur donna de l'émétique en lavage, et les potions, les lavements firent aussi de très-bons effets: néanmoins il restait toujours des éblouissements, des maux de cœur, des vomissements, des cardialgies, des syncopes. Tous ceux que j'ai questionnés sur leur état, à la suite de leur accès, m'ont toujours dit qu'ils avaient ressenti des douleurs inouïes au cœur, et à l'orifice supérieur de l'estomac. Par l'usage suivi de l'émétique, des lavements émoullients, et des autres remèdes, je suis venu à bout de les sauver tous, à l'exception du premier, qui périt en très-peu de temps."

"Cette plante a beaucoup de rapport et de ressemblance avec la ciguë: elle croît à la hauteur d'environ trois pieds: il sort de la racine plusieurs tiges assez éparses, rondes, rameuses, portant des feuilles qui ressemblent à celles du cerfeuil, de couleur verte, brune ou noirâtre, d'un goût âcre et ingrat, remplies d'un suc qui est au commencement laiteux, mais qui jaunit ensuite et devint virulent, puant, venimeux, et ulcérant: ses fleurs sont disposées en ombelles, comme dans la ciguë; chacune d'elles est composée de plusieurs feuilles rangées en rose ou en fleur de lis; elles laissent après qu'elles sont tombées, un petit fruit composé de deux semences oblongues, canelées: ses racines des navets, comme celles de l'asphodèle, blancs, attachés immédiatement à leur tête, sans qu'aucune fibre les suspende, remplis du même suc que la plante: elle ne croît guère que dans les pays froids et septentrionaux; on en trouve en Angleterre, le long des ruiseaux et des autres lieux aquatiques.

C'est un poison mortel, si l'on a eu le malheur d'en avoir avalé; il cause dans le ventricule une ardeur très-douloureuse; il fait tomber dans des convulsions qui renversent les yeux, qui ôtent le sentiment, qui resserrent les mâchoires; il excite des hoquets fréquents, des envies et des efforts inutiles de vomir, des hémorrhagies par les oreilles, des contractions, une tension considérable vers la région de l'estomac: tous ces mauvais accidents font connaître que cette plante par son acrimonie ronge et cautérise la tunique nerveuse de l'estomac."

(Observation sur trente-sept Soldats empoisonnés, pour avoir mangé de la racine d'Oenanthe, par. M. Rochard, Chirurgien-Major de l'Hôpital Militaire, & Correspondent de L'Académie de Chirurgie, à Belle-Isle en mer, Journal de Médecine, Chirurgie, Pharmacie tome 9, Paris 1758, p. 430-431, 433-434)

1759 - A cabinet-maker drank the juice of *Oenanthe crocata* instead of Water Parsnep against a scorbutic disorder - William Watson

"Gentlemen, In the month of June 1746 I communicated to you some observations concerning the *Oenanthe aquatica Succo viroso crocante* of *Lobel*, in relation to its poisonous effects upon some French prisoners at Pembroke. These observations were afterwards published in the Philosophical Transactions, with an accurate representation of the plant itself, from an original drawing by that compleat artist Mr. Ehret. This at that time I thought the more necessary, as it was of no small importance to the public, to be well acquainted with a plant, the effects of which, when taken into our bodies, were so much to be dreaded. This account of mine, as well as the representation of the plant, were republished from the Transactions into the periodical works of that time; from whence a more extensive knowledge of and acquaintance with this plant might have been hoped for. A late instance however has evinced, that these endeavours have not had their full effect, as the plant in question is not yet sufficiently known, and attended to.

John Midlane, a cabinet-maker of Havant in Hampshire, aged about 58, of a gross habit of body, was advised to make use of the water parsnep, as a remedy for a severe scorbutic disorder, which he had long been troubled with; and for which he had taken a variety of medicines. Instead of the water parsnep, which he purposed to take, there were gathered for him some roots of the *oenanthe* above mentioned; a large one of which was pounded in a mortar, and the juice thereof squeezed through a linen cloth, and amounted to about five

spoonfuls. This was suffered to stand all night, and the next morning (March 31, 1758), at about half past five, he drank the whole quantity, except the sediment.

In about an hour and half after he had taken this juice, he walked about the town upon some business; and a little before seven, upon his return home, about an hundred yards from his house, he first complained that he was ill; and having walked about thirty yards further, was so bad as to go into a neighbour's house to rest himself. He was soon led from thence to his own house by two men, and told them, that he was affected as though he had lost the use of his limbs. When he was placed in his chair, he complained greatly of pain all over him; but particularly in his head. His stomach was immediately after affected, and he had great reaching to vomit. At the second attempt he threw up about half a pint of a clear watry liquor; at the first and third attempt he discharged scarce any thing. He was then seized with a great propensity to go to stool, which went off in about three minutes. After this, he with the greatest difficulty was conducted up stairs to bed, where he pulled off part of his clothes himself. When he was put to bed, he was attacked with very severe convulsions, which in about a quarter of an hour deprived him of his senses; and continued, with a few intermissions, till he died, a little before nine o'clock; which was about three hours and half after the juice had been taken. A profuse sweat accompanied the whole of these symptoms: he foamed considerably at the mouth, and his belly swelled greatly. He purged very much soon after he was dead, but not before.

As this poor man had taken his dose before his family were up, no one could imagine from whence his disorder arose; and consequently the apothecary, who was called to him, was able to form a judgement of his case only from the symptoms; as on his coming he found his patient senseless, and who had not, while his mind was undisturbed, told any one the probable cause of his complaints. He took from him however about ten ounces of blood, and endeavoured to get some *vinum ipecacuanhae* into his mouth: but his jaws were closed so fast, not above a spoonful passed, and that by the accident of his mouth opening of itself.

The symptoms, with which the person above-mentioned was attacked, were much the same as those which were observed in the French prisoners, who were poisoned by the same root at Pembroke. In both instances occurred those severe muscular spasms, which kept the under jaw so close to the upper, that, while the spasms continued, scarce any force could separate them. In both instances likewise a considerable time passed before the persons, who had eaten of this root, though they had taken enough of it to destroy them, perceived themselves disordered by it.

I am obliged for this communication to Richard Warner, Esq.; of Woodford, a gentleman of great merit, whose zeal for the promotion of useful knowledge, I have many times experienced.

The expediency of laying before you observations of this sort, which may tend, by making people careful of what they take, to the saving the lives of many, makes no apology necessary for so doing. I am, with all possible regard, Gentleman, your most obedient humble Servant,
W. Watson."

(A further Account of the poisonous Effects of the Oenanthe Aquatica Succo viroso crocante of Lobel, or Hemlock Dropwort, by William Watson, M.D., F.R.S., in: Philosophical Transactions, vol. 50, London 1759, p. 856-859)

1763 - Dix-sept soldats à la citadelle d'Ajaccio en l'Isle de Corse étaient empoisonnés par une bonne soupe - M. Vacher

Le 30 mars 1758, je fus appelé à la citadelle d'Ajaccio, en l'Isle de Corse, pour voir dix-sept soldats du régiment de Flandre qui s'étaient empoisonnés. L'un d'eux ayant voulu, à ce qu'il prétendait, régaler ses camarades d'une bonne soupe, avait été cueillir d'une herbe dont il avait

indistinctement coupé les feuilles et les racines, et leur en avait préparé un potage pour le souper. Ce mets ne leur ayant rien offert que d'agréable au goût, tous en avaient mangé avec avidité et en avaient pleinement satisfait leur appétit; mais une heure après, quelques-uns d'entre eux étaient tombés dans des syncopes et des mouvements convulsifs ; on commença à avoir des soupçons sur la qualité de cette plante, qui ne fut ensuite que trop reconnue pour la véritable cause de leur mal, quand on vit successivement tomber dans les mêmes accidents tous ceux qui avaient eu le plus part de potage.

Un de ces soldats était déjà mort. Un second était expirant, et un troisième donnait pour tout signe de vie des tremblements et des convulsions ; le reste, aussi abattu de frayeur que de mal, pensait voir dans le sort de ses camarades une image de celui qui les menaçait. C'est dans ce funeste état que je les trouvai à 7 heures du soir, deux heures après leur souper. L'activité du poison était si prompte et si subite, que j'en vis tomber en défaillance deux qui, dans la plus grande sécurité pour eux-mêmes, s'occupaient à prodiguer des soins à leurs camarades.

M'étant informé de la qualité du poison, et M. Juliani, chirurgien-major du régiment, ayant cru que c'était une espèce de ruë d'une nature âcre et caustique, je ne pus qu'approuver le soin qu'il avait eu de faire avaler beaucoup d'huile, comme un des moyens les plus propres à adoucir, envelopper les acides et faciliter des vomissements presque nécessaires en pareil cas; cependant, comme ces malades étendus par terre dans une cour, sur de simples couvertures et environnés d'une multitude embarrassante de monde et de soldats, ne me parurent pas en situation de pouvoir être secourus efficacement, mon premier soin fut de les faire aussitôt transporter à l'hôpital.

Le nommé Louis Bernifet, dit Saint-Louis, qui ne donnait aucun signe sensible de vie, quoique d'un tempérament fort et robuste, mourut en y arrivant, sans que je pusse lui administrer le moindre remède, ayant tenté en vain de le réchauffer en le faisant secouer à force de bras dans une couverture, pendant plus d'une demi-heure.

Je fis distribuer à tous les autres des potions émétiques avec l'eau tiède, un grain de tartre stibié et une sixième partie d'huile; et pour faciliter et accélérer en même temps toutes les évacuations, je fis donner à ceux qui me parurent les plus malades des lavements d'eau chaude avec un tiers d'huile d'olive; ces remèdes produisirent leurs effets, et furent pour ceux que le poison n'avait pas encore affectés un préservatif aussi prompt qu'assuré.

Je recueillis ce que je pus trouver de plus entier des morceaux de la plante que les malades avaient vomis ; mais ces parcelles, cuites, mâchées et presque à moitié digérées, ne m'offrirent que des masses informes et méconnaissables.

J'interrogeai les malades, chacun sur son état, et tous m'ayant assuré qu'ils n'avaient pas le moindre sentiment de douleur, je conjecturai que mes premiers soupçons sur l'espèce de la plante n'étaient pas fondés; cependant, pour fixer entièrement mes doutes, je fis faire l'ouverture du soldat qui était mort au quartier. L'estomac, les intestins et généralement tous les viscères m'ayant paru dans la plus belle et la plus saine constitution, sans la moindre marque de tension, d'inflammation ni d'altération quelconque, je crus être suffisamment autorisé à croire que le poison était d'une nature froide et assoupissante. Je fis en conséquence doubler la dose de l'émétique à ceux qui n'avaient pas encore vomi, et je retranchai totalement les huiles comme un remède absolument inutile dans les cas où il faut susciter l'action trop languissante des fibres et des vaisseaux.

Guillaume Trelacheau, d'un tempérament fort et robuste, âgé d'environ 20 ans, qui avait été l'auteur de ce funeste régal et celui qui s'en était le plus rassasié, était aussi celui qui paraissait dans l'état le plus désespéré. Le renversement des yeux, la contraction de la mâchoire inférieure, la faiblesse du pouls, la privation du mouvement, de sentiment et de connaissance, enfin un froid universel répandu par tout le corps, semblaient être autant de signes assurés de

sa perte ; cependant je ne perdis pas tout espoir. Après quelques tentatives vainement réitérées pour lui faire prendre l'émétique, j'eus recours, à tout hasard, à la faible ressource de le faire rouler et fortement secouer dans une couverture; cet exercice, exécuté par huit hommes, dura près de deux heures, sans que le malade donnât la moindre espérance. A la fin, cependant, le corps agité reprit chaleur, et j'eus la satisfaction de le voir recouvrer insensiblement le mouvement et la vie. Les premiers signes qu'il en donna furent des efforts pour vomir, qui, bientôt suivis de leurs effets et secondés par quelques verres d'émétique, suscitèrent fructueusement la machine et la ranimèrent, au grand étonnement des assistants.

Le nommé Etienne Gorzanne, dit Bienaimé, qui avait vomi plusieurs fois au quartier et était venu de son pied à l'hôpital, n'en essuya pas moins une bonne partie de ces accidents. Une demi-heure après son entrée, il tomba dans des convulsions générales des membres, des yeux, de la bouche et des mâchoires, et resta quelque temps dans cet état, sans qu'il fût possible de lui rien faire avaler. J'employai encore le même secours avec le même succès, et le malade, après quelques vomissements où il rendit même plusieurs vers, ayant repris ses sens, se prêta à tout ce que l'on exigea de lui et se trouva, au bout de trois heures, parfaitement rétabli, sans ressentir autre chose qu'un peu de fatigue que la violence des secousses lui avait causée.

De ceux qui restaient, les uns n'avaient pas senti encore la moindre indisposition, les autres n'avaient eu que de légers accidents, tels que des étourdissements et des faiblesses, principalement aux jambes, néanmoins sans aucun changement notable au pouls. Lazare Voichourru était le seul qui se plaignît de douleurs d'estomac, mais c'était peut-être avec aussi peu de fondement qu'il s'était imaginé que le ventre lui enflait, quoique je ne lui trouvasse ni gonflement ni tension à cette partie. On remarqua cependant qu'il eut un accès de fièvre qui lui dura plus de six heures.

Après m'être assuré que tous mes malades avaient vomi, je leur ordonnai, deux heures après, des potions d'oxymel scillitique, comme un remède propre à exciter et à agacer les fibres de l'estomac et du canal intestinal; mais n'ayant pas trouvé le vinaigre préparé, qui doit entrer dans cette composition, je m'en tins à l'oxymel simple, où je fis ajouter pour ceux que le vomissement avait trop fatigués, un gros et jusqu'à un gros et demi de thériaque. Après toutes ces mesures prises, je crus mes malades hors de danger, et tous en effet, à l'exception du nommé Trelacheau, me parurent jouir de toute leur vigueur de corps et d'esprit. C'est dans cet état que je les laissais à minuit, recommandant au chirurgien de garde de les empêcher de dormir jusqu'à ma visite du matin, et de me faire appeler en cas de besoin.

La nuit se passa sans accidents, et le matin je les trouvai tous, excepté Trelacheau, dans la plus parfaite santé, se plaignant seulement d'un peu de fatigue et de beaucoup d'appétit; dans la crainte cependant qu'il ne subsistât encore quelques restes du poison dans les intestins, je fis donner à ceux que l'émétique n'avait pas purgés une potion légèrement purgative, à ceux que l'émétique avait trop fatigués une seconde prise d'oxymel avec un gros de thériaque. Comme je craignis aussi que l'estomac, affaibli ou stupéfié, n'eût pas encore repris sa première force et ne fût pas encore en état de digérer, je les tins tous à la diète le matin, et les mis au quart de portion pour le soir. Tous ayant mangé avec appétit et nul accident n'étant survenu, je les mis ainsi par degrés à la portion entière, et tous sortirent de l'hôpital le 4 avril, sixième jour de leur accident.

Il ne restait que Guillaume Trelacheau, dont l'état, encore mal assuré, ne donnait pas de grandes espérances: après un assoupissement de quinze heures, d'où on ne l'avait tiré qu'à force de remèdes, étaient survenues des ardeurs et des douleurs par tout le corps, dont la violence ne faisait que s'opiniâtrer. Cependant, comme je ne pouvais guères les attribuer qu'aux secousses que le malade avait souffertes, et qu'elles n'étaient d'ailleurs accompagnées ni de fièvres ni de tension quelconque dans aucune partie du corps, je ne pensais pas qu'elles méritassent une attention particulière, ni qu'elles dussent me détourner de mon objet principal.

D'ailleurs le malade, vomissant tout ce qu'il prenait, semblait plutôt avoir besoin de cordiaux et de corroborants que de tout remède propre à calmer ou à apaiser ses douleurs. C'est dans cette vue que, ne pouvant lui administrer un purgatif, comme je me l'étais proposé, je lui fis donner, le 31 au soir, une troisième prise d'oxymel avec un gros de thériaque; et pour procurer ou entretenir en même temps le relâchement et la liberté du ventre, j'ordonnai un second lavement d'eau tiède et de deux onces d'huile d'olive.

Le 1er avril, le malade continuant de vomir tout ce qu'il prenait, et se plaignant toujours de ses douleurs, je ne crus pas pouvoir remédier à un de ces maux sans courir risque d'aggraver la cause de l'autre. C'est pourquoi, bien loin de lui ordonner aucun remède, je défendis qu'on le pressât de prendre ni bouillon ni tisane, et que dans le cas où il en demanderait, on ne lui en donnât qu'à de très-petites gorgées, avec la précaution de délayer des jaunes d'œuf dans ses bouillons. Cependant, comme il avait la langue extrêmement douloureuse, et tuméfiée des morsures qu'il s'étaient faites dans le temps de ses convulsions, et que cette incommodité lui laissait à peine la liberté de prononcer quelques mots mal articulés, je lui ordonnai de se laver souvent la bouche avec un tiers d'eau et deux tiers d'eau-de-vie tièdes; et le soir je lui fis donner un lavement d'eau et d'huile.

Le 2, les douleurs étaient devenues plus vives et moins supportables, et le malade ayant beaucoup saigné du nez la nuit, je lui fis faire une saignée du bras le matin et donner une potion huileuse avec un lavement à midi, mais ces remèdes n'ayant pas procuré de soulagement sensible, le malade ayant de nouveau saigné du nez et se plaignant d'une nouvelle douleur à l'hypochondre droit, je fis réitérer le tout sur le soir.

Le 3, à l'aide de ces remèdes, les douleurs se calmèrent un peu, et je profitai de ce moment de relâche pour purger le malade. Le remède resta assez de temps dans l'estomac pour produire l'effet que j'en espérais; mais le soir l'hémorragie du nez et les douleurs s'étant renouvelées, je fus obligé de revenir pour une troisième fois à la saignée.

Le 4, le malade ayant plus souffert qu'à l'ordinaire, et ne pouvant absolument rien prendre qu'il ne le vomît aussitôt, je lui ordonnai à prendre par cuillerées un looch composé de parties égales d'huile, de sirop et d'oxymel, et lui fis faire une embrocation sur le côté, avec l'eau-de-vie et l'huile d'hypericum, qu'on réitéra le soir avec deux lavements.

Le 5, mêmes accidents et mêmes remèdes, avec cette différence que, le malade se plaignant d'insomnie, de chaleur et d'altération, sans qu'il y eût cependant aucune apparence de fièvre, je lui fis administrer un julep émulsionné, anodin, et le mis à l'usage des émulsions.

Les quatre jours suivants n'eurent rien de remarquable que la diminution sensible de ces accidents et le commencement de la convalescence.

Le 10, les douleurs et l'enflure de la langue s'étant entièrement dissipées, et le malade ne se plaignant plus que de beaucoup d'altération, je lui fis donner de la limonade, dont l'usage continué le désaltéra enfin totalement, au bout de quatre à cinq jours.

Le 11, comme l'appétit ne se déclarait pas encore, je lui fit user de quelques prises d'extrait de genièvre, dont l'effet le mit bientôt en état de pouvoir manger la portion entière : par ce moyen ayant repris ses forces, il sortit parfaitement guéri le 21 avril, vingt-troisième jour de son accident, ne se ressouvenant aucunement de tout ce qui lui était arrivé depuis le premier jusqu'au troisième jour de sa maladie, non plus que de circonstances qui l'avaient accompagnée et de celles qui y avaient donné lieu.

Je ne fus pas long-temps, sans connaître la plante qui avait occasionné tous ces accidents, moyennant les indices que m'en donnèrent ceux même qui en avaient été empoisonnés. Il ne me fut pas difficile de la trouver dans l'endroit même où elle avait été cueillie: en voici la description.

Cette plante est d'une couleur verte très-foncée, et croît en plusieurs tiges, de la hauteur d'environ trois pieds: ces tiges sont rondes, cannelées, blanches en dedans, poreuses, assez éparsés, et deviennent plus creuses et plus grêles, à mesure qu'elles approchent de leurs sommités; ses feuilles sont fort semblables à celles du persil, avec cette différence, qu'elles sont un peu plus rudes au toucher, plus grandes et plus étendues, relativement à la grandeur de la plante; elles sont toutes taillées, à leur naissance, en forme de gouttière ou de gaîne, qui embrasse chaque tige dans chacune de ses divisions, où elles forment des espèces de nœuds ou d'anneaux, qui se distinguent plus visiblement près de la racine, où ils sont ordinairement blancs, et en plus ou moins grand nombre, suivant la hauteur et la force de la plante: ses fleurs sont en ombelles, blanches et sans odeur; chaque fleur est composée de cinq pétales incisées assez profondément à leur bord supérieur, et soutenues par un pistile fourchu: chaque pétale porte une étamine, dont la houppe est de couleur rouge-pourpre: cette plante a le goût un peu âcre, et ne rend pas beaucoup de suc; son odeur n'est point désagréable, et approche assez de celle du céleri: ses racines ressemblent à de petits navets, plus ou moins cannelés, qui tiennent tous, par leur têtes, immédiatement à la tige, et qui sont quelquefois entre-mêlés de petits filaments tendres et délicats. Cette plante se trouve assez communément dans les ruisseaux, les ravins de l'Isle de Corse, et fleurit au mois de Mai.

La description et les effets de cette plante se trouvant assez conformes à ceux qui sont rapportés dans le troisième tome des Adversaire de Lobell, on ne peut douter que ce ne soit la même que cet auteur désigne sous le nom de *Oenanthe succo viroso cicutae facie*, dont il rapporte même les effets dangereux, lorsqu'on la mange, mêlée avec les aliments.

J'observerai cependant que je n'y ai point trouvé ce suc jaune, safrané et violent, dont il est parlé dans plusieurs auteurs." (...)

"Les corses connaissent cette plante, comme un poison froid, sous le nom de *Occhio grizo*, par je ne sais quelle raison d'étymologie; ce qui signifie en français, *Œil gris*, figurément, *Bouton gris*, *Perle grise*."

(Observations sur l'Oenanthe, par M. Vacher, Docteur-régent de la faculté de médecine de Paris, ci-devant Médecin des troupes de S. M. en l'Isle de Corse. Journal de médecine, chirurgie et pharmacie, tome 18, Paris, 1763, p. 236-248, 252-253)

1782 - A boy nine years old at Liverpool ate the root of hemlock-dropwort - Thomas Houlston

"June 9th 1781, the eldest son of the Rev. Mr. Kirkpatrick, a dissenting minister, about nine years old, rambling with several other children in the fields to the Leeds Canal near Liverpool, gathered, and gave to the others, a number of the roots of the hemlock-dropwort, which he believed to were ground nuts, and of which he eat a much greater quantity than the rest. As he was returning home he grew giddy, and if he had not been prevented would have reeled into the canal. His inability to direct his motions increased gradually, and he was soon affected with stupor and convulsions. His mother, apprized of his situation, speedingly came to him, and immediately, as she said, conceived the idea of his having eat something, the effects of which were similar to the poison administered to Sir Theodosius Boughton, till which time no such thing had been apprehended. Some water out of the canal was given him to drink, and he vomited a considerable quantity of the root he had swallowed; he however grew worse, raved, became heavy and convulsed, and was carried into a house adjoining. Mr. Shertcliffe, a surgeon in the neighbourhood, was sent for, who, with a view to evacuate what he had taken, gave him a solution of emetic tartar, and a purgative glyster.

He had swallowed at least twenty grains of tartar emetic, when I was sent for to him about eight in the evening. I found him quite in the epileptic state, with the pupil vastly dilated, total insensibility, and all the appearance of a person in the last degree of intoxication. Convinced

that unless the contents of the stomach could be expelled, no hope of his recovery remained, I gave, in solution, a scruple of white vitriol, most part of which was got down.

The convulsions, for some time past, had been strong and frequent; they seemed to begin with an effort, as it were to vomit (though after he got into the house he never vomited in the least). The head was drawn to the right side, and thrown back, general spasms succeeded, the eyes started prodigiously out from the sockets, and the tongue was thrust out, and forcibly bit. Some aether was sent for, and I poured a small quantity into the mouth, on the temples, &c. It was thought at times to relieve the fits which interrupted the circulation so as to render the pulse imperceptible; and to give often reason to suppose it was irrecoverably stopped. In this manner, however, the scene was closed at last, rather placidly, about ten o'clock at night, after he had suffered thus above four hours. The respiration, though slow, continued tolerably easy, almost to the last. The clyster operated a little before he died, and a very offensive stool followed.

Notwithstanding the boy had thrown up a considerably quantity of the root, yet I had no doubt but that such a part of what he had eaten remained in the stomach as would render every effort to save him ineffectual. The event unfortunately answered my expectations, and dissection confirmed the truth of the conjecture. Mr. Shertcliffe found in the stomach above an handful of the root, and noticed very sensibly the smell peculiar to it, the moment he cut into the cellular membrane, though it was not till twenty-four hours after death.

It was at first supposed that what the boys had gathered and eaten was the water-parsnip; and afterwards that it was the water-hemlock. Indeed Boerhaave, in his *Historia Plantarum*, under the article *Sium (water-parsnip)* commends the first species for its aperient, emollient, and detergent qualities; but adds, "that he never had dared to administer it, from the resemblance which it bears to the second species, the *cicuta aquatica*, of which those who have eaten, unless relieved by vomiting, died dreadfully and singularly convulsed." The latter (the *water-hemlock*) which is extremely poisonous, is frequently confounded also with the *hemlock-dropwort*, the plant now spoken of, which is equally dangerous, and is termed by Lobel, Ray, and others, *Oenanthe cicutae facie*. This, however it is certain, was the one pitched upon by the boy, who with difficulty recovered, as the root he and his companions had eat of.

Four of the other boys in company with had partaken, though more sparingly, of the noxious repast, but on the first alarm, vomits having been exhibited, they all escaped. One, however, was with difficulty made to vomit, though he took largely both emetic tartar and ipecacuanha, and he was affected with giddiness, drowsiness, and twitching so much that for some hours his recovery remained doubtful. He told me he had eaten one root and a half; and more than two hours had elapsed before he was sensibly affected by it.

This unfortunate accident, as well as the one which was lately the subject of a judicial discussion, proves how fatally certain is the effect of the poisons of this class. These vegetable poisons do not, like the mineral ones, become fatal by producing inflammation of the stomach, though at first they stimulate, and endeavour to promote their own discharge, yet their baneful action is solely on the nervous system. Like to *opium* or *spirits*, they bring on such a degree of insensibility, or, as some suppose, of spasm, as wholly to destroy or counteract *the power of the stomach to expel them*, whilst their continuance there must inevitably prove fatal; whereas many *mineral poisons* may be decomposed by any alkali; and even the danger from drinking *spirits*, may be greatly lessened, by conveying into the stomach (by means of a pipe beyond the glottis) large quantities of water to dilute them after the power of vomiting, as well as of swallowing, is lost.

To render a poisonous vegetable in the stomach, which cannot be evacuated, inactive, is what we are yet unequal to. - To dilute it would probably be, at least, a vain attempt, if it did not (by the liquid acting as a menstruum) elicit and render more active the poisonous quality; and

unfortunately, to evacuate it, after it has remained long enough to produce in a certain degree, its effect on the stomach, seems next to impossible. We should, however, when there is the east ground to suspect any thing of this kind, immediately endeavour, by an active emetic, to evacuate the stomach, whilst there yet remains a possibility of doing it. On the early exhibition of a vomit in such cases depends its operation, and on that only, perhaps, the security of the patient."

(Case of a boy poisoned by the root of hemlock-dropwort. By Thomas Houlston, M.D., Physician to the Liverpool Infirmary. Communicated by William Hawes, M.D. Physician in London. The London Medical Journal vol. 2, London 1782, p. 40-46)

1785 - A poor woman at Blandford drank by mistake the juice of the root of Hemlock Dropwort - Richard Pulteney

"A Person in the neighbourhood of Blandford having lately been poisoned through a mistake, and the circumstances of the fact variously misrepresented, has induced me to draw up a brief state of the case, from the best information I could procure after her death; and it is accompanied by some observations, which may have a tendency to put people on their guard against such errors. ^[1]

It has been recommended to this poor woman to take the juice of *water parsnep* and *water cresses*. The person employed to procure these herbs, unhappily mistook, for the former of them, the *hemlock dropwort*; and, as an aggravation of this evil, the juice of the root, which is more virulent than that of the leaves, was used. She drank little, if any, more than half a teacup full, in the morning fasting. In less than a quarter of an hour she complained of excessive giddiness, and soon after vomited, but not plentifully; before the half hour was completed, convulsions came on, and she was from that time deprived of the power of swallowing, and of her senses. In this condition, owing to the consternation of the family was in, little or nothing was got down, and the fits following each other fast, and increasing in strength, after having suffered nine or ten of them, she died in two hours and an half from the time of swallowing the fatal potion."

"The symptoms induced by hemlock dropwort, in the instance before us, sufficiently correspond with those recited in almost all the histories of its poisonous effects on record. Where the quantity swallowed was considerable, it did not fail, very soon, to bring on giddiness and sickness, which were succeeded by convulsions, and such a contraction of the jaw, as precluded, in many instances, the use of proper assistance."

(An account of the poisonous effects of the *Oenanthe Crocata*, or Hemlock Dropwort; by Richard Pulteney, M.D.F.R.S. physician at Blandford. Communicated in a letter to Maxwell Garthsore, M.D.F.R.S. & S.A. and by him to Dr. Simmons. The London Medical Journal vol. 5, London 1785, p.192-193, 197)

[1] For the part "Observations" (p. 193-197) look at "Die Pflanze / The Plant 1785"

1797 - A young woman took by mistake the juice of the root of hemlock dropwort for an eruption in her face - Robert Graves

"Among the numerous poisonous plants with which the vegetable kingdom abounds, there are few, perhaps, natives of this country, more virulent and speedy in their effects, than that which gave birth to the following melancholy incident; in confirmation of which, indeed, too many fatal examples are to be found, scattered in the writings of medical men. Against so destructive an enemy to mankind, therefore, it behoves us to be particularly on our guard; and every unhappy instance wherein the contrary takes place ought not, in my opinion, to be suffered to pass wholly unrecorded. It is only from being made acquainted with the errors of defective caution of others, that we, in many cases, become mindful to keep clear of such ourselves.

A young woman, about twenty-four years of age, servant to a lady in this neighbourhood, having been recommended by a medical practitioner of eminence, to take the juice of the water-parsnep for an eruptive complaint in her face, became exceedingly desirous of trying it in the month of May last. The gardener of the family was applied to, and earnestly entreated by her to collect the plant; but from its not being sufficiently known to him, he at first hesitated, very properly, to comply with her request. It happened, that in a moist watery ditch or brook, within a short distance of the house where she lived, a large quantity of hemlock dropwort was growing. This unfortunately she discovered, and conceiving, both from its smell and appearance, to be the herb which she was in quest of, she communicated the same to the gardener, with an express declaration, that if he would not gather some for her, she would undertake to do it herself. The gardener being thus forcibly solicited, and not aware of the virulent and deadly nature of the plant which he was about to furnish her with, was at length brought to compliance.

On the morning of the 19th of the same month, being plentifully supplied with the whole plant, she took the roots of it, bruised them herself, and expressed from them, as it was supposed, juice to the amount of two table spoonfuls at least, which she swallowed. Scarcely had more than ten of fifteen minutes elapsed afterwards, before she complained of great giddiness, accompanied with vast uneasiness and sickness at stomach, though not such as to be succeeded by vomiting; convulsions likewise speedily supervened, and she became entirely deprived of her senses.

It was about half an hour after this, when I was called to her assistance. At that period the convulsive paroxysms were become not only stronger, but recurred in quicker succession; all sensibility was destroyed; the mouth firmly open, with scarce any pulse to be felt at the wrist, and a coldness seized the extremities. Prior to my seeing her, repeated draughts of milk and oil had been got down, agreeably to the advice of Mr. Arden, a judicious and experienced surgeon of this place, but without the least apparent effect, or sickness, succeeding. Wishing, therefore, if possible, notwithstanding the truly hopeless state of the case, to solicit a discharge of the poison as the most effectual step towards affording relief, an emetic was immediately sent for; but though it arrived in the short space of ten or twelve minutes, she did not survive even to take it. Besides the repeated draughts of milk and oil above mentioned, between two and three ounces of vinegar also were forced down, at my direction, from an idea that this acid might act somewhat as a corrective.

I shall close this case with a very necessary caution, and which I think cannot be too strongly impressed on the minds of medical men. Though that species of the water-parsnep (*Sium nodiflorum*, Linn.) directed by the London college, bears but little resemblance indeed to the hemlock dropwort; yet from the fatal error here related, joined to a familiar one, which happened also in this country but a few years since ⁽¹⁾, practitioners, I conceive, ought on no account, whenever they should deem it proper to recommend the former plant, to trust to unskilful people to gather it. Both plants are to be found frequently inhabiting the very same moist, watery situations; and the ignorant and unwary are as likely to be imposed upon by the latter, as to have their choice determined, or attention drawn by the former."

(1) London Medical Journal vol.5, p. 192.

(A fatal Instance of the poisonous Effects of the *Oenanthe Crocata* Linn. or Hemlock Dropwort. Communicated in a Letter to Dr. Simmons, by Robert Graves, M.D. Physician at Dorchester, and Extra Licentiate of the College of Physicians, London. In: Medical Facts and Observations, vol. 7, London 1797, p. 308-312)

1830 - Des effets chez un experimenteur qui avait râpé et touché les racines long-temps avec les mains nues - Cormerais et Pihan-Dufeillay

"Il est important, pour ceux qui voudraient répéter cette analyse, d'être prévenus qu'il ne faut manier ces racines qu'avec la plus grande précaution, car celui de deux expérimentateurs qui

les avait r p es et touch es long-temps avec les mains nues, a  prouv  les accidens suivans:

D s le premier jour, un prurit extr me s' st fait sentir au-dessus des ongles; il a  t  suivi d'une  ruption confluente, semblable   celle que cause la pique des orties. Cette  ruption a bient t gagn  les mains, les bras, et toutes les parties du corps qui avaient  t  touch es m me instantan ment par le suc de la plante: cette affection, qui a augment  pendant quatre jours, a  t  accompagn e d'une fi vre violente, du gonflement de la face et d'un prurit intol rable, qui ne se calmait qu'en tentant les mains dans l'eau tr s-froide; enfin, l'engorgement et les douleurs profondes et lancinantes dans les mains ont n cessit  une large application des sangsues, qui a amen  la r solution de cette inflammation. L' ruption, qui n'a compl tement disparu qu'au bout de quinze jours, a  t  suivie de la chute compl te de l' piderme.

Le m me personne ayant eu l'imprudence, apr s sa gu rison, de manier ces racines sans pr caution, a  prouv  sur les mains une r cidive qui, bien que moins grave, n'a c d  qu'aux  mouillants, et a  t  suivie d'une nouvelle chute de l' piderme."

"Une jeune homme, travaillant dans le laboratoire des exp rimentateurs, a voulu s' tendre sur les mains une l g re couche d'une dissolution alcoolique de cette racine; elle y a s journ  une demi-heure; puis il a lav  la partie avec de l'eau et un peu de savon; trois heures apr s, une  ruption, semblable   celle qu' prouv e l'un des auteurs de l'analyse, recouvrait ses mains; elle a  t  accompagn e d'engorgement, de rougeur, et d'un prurit assez fort. Ces accidens ont c d  aux frictions huileuses, aux cataplasmes et aux fomentations  mouillantes."

(Examen chimique et toxicologique des racines de l'oenanthe safran e (oenanthe crocata, Linn.); par MM. Cormerais et Pihan-Dufeillay, Journal de chimie m dicale 1^{er} s rie, tome 6 (1830), p. 461, 468-469)

1833 - A young dairy maid ate deliberately a piece of the root of *Oenanthe crocata* - Joseph Froyssell

"SIR, - On Sunday, the 6th inst., seven cows, the property of a farmer in this neighbourhood, broke into a field in which labourers had been clearing a water course, and ate a quantity of the roots of the *oenanthe crocata*, which destroyed them all, from whence arose the following case, which I transmit for insertion in THE LANCET, if you deem it worthy a place in your valuable Journal.

And am, Sir, yours, &c.,

Joseph Froyssell, Surgeon, Knighton, Radnorshire

Mary - , dairy maid, aetat. 28, on the 13th inst., at eight o'clock a.m., deliberately washed, and ate, a piece, of the size of a walnut of the root of the *oenanthe crocata*. Finding no effect result from the poisonous substance, except a slight degree of dizziness, at eleven o'clock she repeated the dose. About half-past twelve she was found upon the bed in a state of insensibility. I saw her at a quarter before one, when the pupil of the eye was contracted to the size of a pin's head. Pulse 40, small, and wiry; skin cold and moist, especially over the hands and forehead; breathing free; countenance natural; speechless. She had lost the power of deglutition.

In the matter ejected from the stomach before my arrival, and which still remained on the floor, I found parts of the root in a distinct but well-masticated state. After a fruitless endeavour to make her swallow, I had recourse to the stomach pump, and drew away about (when collected) a tablespoonful of the root, mixed with the water previously injected. Finding the oesophageal tube obstructed, and fearing that it was occasioned by the root, I injected half a dram of the sulphate of zinc in solution. In about five minutes this acted upon the stomach, bringing with it a few lumps of the root too large to have passed through the tube of the instrument. Shortly afterwards she began to speak incoherently. I then directed her to be kept constantly in motion between two men; the vomiting was encouraged by means of warm water, which she had now the power of swallowing. None of the root making its

appearance, and feeling satisfied that it was all ejected, I administered repeated draughts of the acetic acid diluted with water. Much of this was thrown up, but she recovered rapidly after its administration.

Five p.m. The pupil had dilated to about the size of a large grain of pearl barley; bowels had acted (no portion of root was discovered in the evacuation); vomiting ceased; pulse raised to 70, small, and jerking; skin hot; sensibility returned; was able to answer questions.

Eight p.m. Complains of headache. Iris acts freely. Ordered an aperient mixture, which was retained by the stomach.

14th. At my visit this morning I found her down-stairs. The bowels had acted freely, no symptom of the poison remaining. She was not conscious that the stomach-pump had been used."

(Joseph Froyssell, Surgeon, Poisoning with the Oenanthe Crocata, Letter to the Editor of The Lancet vol. 34, London 1833, vol. 1, p. 860)

1836 - Effects on a man who was employed to crush the plant and on a man who ate a morsel of the root - A. T. Thomson

"Every part of this plant is poisonous; its recent juice is so acrid that it excoriates the skin when it is applied to it. A man who was employed by MM. Cormerias and Pinan-Dufaillay to crush the plant, preparatory to their making an analysis of it, was attacked with irritation of the hands and the arms, with sharp, lancinating pains, an eruption, swelling of the face, acceleration of the pulse, and other symptoms of great irritation, which continued for fifteen days.

A morsel of the root, the size of a walnut, was eaten by a man, and killed him in two hours. The symptoms were rigors, heat in the throat and stomach, delirium, convulsions and coma. These symptoms were accompanied with red, ecchymosed patches on the face and chest, and loss of sensibility. The effects of the poison were not felt for some time after the root was eaten, but death ensued in four hours."

(Lectures on Medical Jurisprudence, now in course of delivery, at the University College London, by Professor A. T. Thomson, The Lancet 1836, vol. 2, p. 850)

1836 - Une famille de cinq personnes se frottèrent le corps avec l'oenanthe safrancée contre la gale - A. Chevalier

"Un événement déplorable a eu lieu tout récemment dans la commune d'Anglet, près Bayonne (Basses Pyrénées). Une famille de cinq personnes, le père, la mère, un garçon de ferme, deux enfans, l'un de huit ans, l'autre de onze mois, étant atteints de la gale, se frottèrent le corps avec de la ciguë aquatique, le cicutaria aquatica, qui est aussi connue sous le nom d'oenanthe safrancée; tous éprouvèrent tous les symptômes d'un violent empoisonnement: le garçon de ferme et le plus jeune des deux enfans succombèrent dans les plus atroces douleurs. Les trois autres malades furent sauvés, grâce aux secours empressés d'un médecin qui fut appelé à temps."

(A. Chevalier, Empoisonnement par la ciguë aquatique, Journal de chimie médicale, de pharmacie, de toxicologie 2^e série, tome 2, Paris 1836, p. 606)

1844 - Several convicts at Woolwich ate the roots which they mistook for celery - P. Bossey

"Twenty-one convicts were employed, on the 4th Feb. 1843, at the mortarmill situated on the banks of a canal in the Royal Arsenal at Woolwich. At 11 o'clock in the forenoon eight or ten of them went round the building to an adjacent pond of water, in order to wash their spades

and boots. One man (Chamberlaine) strayed away from the rest, and found this plant growing near the brink of the canal, the leaves and roots of which he mistook for celery. He dug up some, washed, tasted, and conveyed it to his companions. Several of the men returned to the spot, assisted him to obtain more of the roots, ate them freely, and distributed portions among their fellow-workmen who remained within the building.

At 20 minutes past 11, under the direction of the keeper, they were all about to fall into ranks for the purpose of returning on board-ship to dinner (most of them still eating and putting roots into their pockets), when one (Wilkinson), without any apparent warning, fell down in strong convulsions. The struggling was soon over; he became better, but retained a wild expression in the countenance, which was pale, and in a short time he had another fit. Whilst they laid him upon a shutter, a second individual fell (Knight), and before they reached the yard adjoining the hulk, a third (Wilson) and a fourth (Salt) had also fallen, and were convulsed.

I arrived to give assistance about a quarter before 12 o'clock. Nine stout young men were at this time convulsed and insensible. The three worst, Wilkinson, Knight, and Wilson, were lying in a shed; Chamberlaine, Gundle, and Jeffs, had just fallen in the yard; and Williams, Jones, and Salt, were struggling on the deck of the vessel.

It was manifest that Wilkinson was dying. His bloated livid face, the sanguineous foam about the mouth and nostrils, the stertorous snort and convulsive breathing, and the extreme prostration and insensibility, plainly indicated that every remedial measure would be useless. Nothing was done but to raise the head and shoulders, and he died in five minutes.

Knight had been strongly and repeatedly convulsed, and appeared to be fast hastening into the same apoplectic condition. He was insensible, speechless, the pupils dilated, the face swollen and livid, the breathing laboured, and the limbs convulsed. To make him swallow was impossible; the rigid jaws were therefore forced asunder, and, by means of the stomach-pump, warm water was abundantly introduced and withdrawn from the stomach. Some leaves were extracted with the fluids, but the instrument was worked with the greatest difficulty owing to the severity of the convulsions. He died in a quarter of an hour.

Wilson had assisted to carry the two former: when near the yard he was observed to look pale, and soon fell convulsed. He struggled so violently that several strong men could scarcely hold him. After the fit he was restless; consciousness partly returned; he answered "yes" when his name was loudly called, and swallowed an emetic solution of sulphate of copper. No vomiting was induced, the convulsions were renewed; the stomach-pump was passed, but extracted only fluids. A collapse threatening immediate dissolution followed; his strength was gone, face pale, pupils dilated, breathing convulsive, and he appeared dying. After some time the stomach-pump was again employed, and small portions of the root, with a few leaves, withdrawn. Convulsions returned, with strong struggling, and about half-past 12 o'clock, in a fit, he suddenly died.

Emetics of salt and mustard, with warm water, were administered to those who had fallen in the yard, under which they vomited freely, and discharged a large quantity of imperfectly masticated root, and were thereby greatly relieved. The convulsions ceased, sensation and reason were restored, but there remained giddiness, pallor of the face, dilated pupils, coldness of the extremities, much weakness, severe rigors, and a slow feeble pulse. Further vomiting was promoted, and more of the root discharged. Friction and warmth were applied to the extremities, whilst ammonia and rum with thin gruel and other drinks were administered internally till reaction was more fully established.

Emetic doses of the sulphates of zinc and copper, and also mustard and water, were given without effect to the patients lying on the deck of the vessel. They were also bled very largely

both from the arms and jugular veins. The introduction into, and removal of warm water from, the stomach by the pump brought away small portions of the noxious roots. Cold affusion upon the head perseveringly used lessened the struggling and produced some exhaustion. In three cases (Salt, Williams, and Burgess) the subsequent fits became less violent; they passed into a state of maniacal delirium, with much jactitation of the limbs, and after some hours were removed into the hospital. But in one more patient (Jones) all these remedies were ineffectual: he died convulsed at a quarter before 1 o'clock. As a last effort, the trachea was carefully opened by an incision, and artificial respiration kept up, but life was quite extinct.

Several of the men who had eaten the root, seeing the others suffer, took the salt-water emetic with success, and had no symptoms of being poisoned; others felt giddiness and faintness in a slight degree, and at 6 p.m. there were upon examination eleven who required watching, and were therefore sent into hospital.

Extracts from Notes of Cases in Hospital.

Feb. 4th. - Jeremiah Chamberlaine, aet. 24, admitted at 6 p.m. in slight stupor; countenance anxious, depressed; is drowsy; the eyelids half closed; pupils dilated; tongue clean; skin cool; slow pulse. Took a purging draught, and an enema of salts and senna, which produced two motions, the first principally the injection; the second, copious, fluid, brown, and mixed with white root, resembling what they had eaten. Purgatives repeated, with magnesia.

10 p.m. - No motion; countenance improved; sleeping.

5th, 1 a.m. - Is sick, and looks worse; countenance anxious and sunken; pupils dilated; the hands and face feel warmer; complains of pain in his chest and abdomen, the latter is hard and tender; no further motion; tongue clean; pulse feeble; seems weaker. Ordered Ammonia, &c.

3 a.m. - Is warmer; pulse stronger; sleeping. Bowels once opened.

10 a.m. - Countenance improved; mouth dry and parched; thirst; tongue slightly coated; tenderness, hardness, and pain in the abdomen; no further motion; no urine since midnight. Purgatives continued.

4 p.m. - A sudden distension of the abdomen, with shortness of breathing; pulse 66; lies in a perfectly relaxed position; pupils dilated; no pain or headache, and no motion. Purgatives and Enemata repeated, with Assafoetida.

Midnight. - Has passed one motion, copious, fluid, dark brown in colour, with pieces of the root discernible. No abdominal pain; urine thick, and dark-coloured.

6th, 8 a.m. - Is much better. Abdominal swelling and tenderness gone.

4 p.m. - Tongue white; pupils natural; urine plentiful, dark in colour, with a thick yellowish sediment; had three motions similar in character.

7th. - Tongue white, red at the edges, but recovering.

8th. - Pain in the head; bowels confined; tongue cleaner; urine free, dark-coloured, with sediment. Took castor-oil, which produced one copious fluid motion, yellow in colour, and in which the root can still be seen.

17th - Discharged recovered.

John Williams, aged 22, admitted 6 p.m. on 4th February, in the same comatose condition: sleepy; roused with difficulty; has had one motion, natural.

10 p.m. - Feels a pain in the breast. Has just vomited a dark-brown slimy fluid. Feels better, and his countenance improves.

Midnight, 2 and 5 o'clock. - Sleeping.

7th. - 10 a.m. - Feels quite well. Has passed motions in which a small quantity of the root is seen.

8th. - Appeared quite recovered, and was discharged to duty.

9th. - Readmitted in consequence of an attack of syncope. Tongue slightly coated; no pain. Ordered a calomel purge.

10th. - Had three motions, in the first of which the root was still seen, but the particles were much smaller. Repeat the purgative.

17th. - Discharged recovered.

William Jeffs, aged 23, when admitted at 6 p.m. on the 4th February, had slight symptoms of coma and exhaustion, which went off after free purging, and as he seemed quite well was discharged on the 8th.

10th. - Readmitted faint and collapsed, hands and face cold; lips blue; headache and giddiness; tongue moist, slightly furred; injection of the eyes. A Calomel purge.

At 4 p.m. had a copious yellow motion, in which the root is plainly seen.

11 and 12. - Slight fever, with pain at the pit of the stomach. Purgatives and salines.

13th. - Still feverish. The pain in stomach gone; slight pain in the left side; urine plentiful, dark-coloured, turbid; bowels confined; abdomen rather hard.

Went on well till the 22d February, when the tenderness at the stomach was renewed, with giddiness, thirst, and pain in the right side under the ribs. Twelve leeches were applied, and purgatives with salines continued.

23d. - Less abdominal tenderness; slight giddiness; fever subsiding.

March 3d. - Discharged recovered.

Joseph Salt, set. 17, admitted Feb. 4th: though he continued in a state of delirium and insensibility, yet his exhaustion rendered it needful to convey him even with care in a cot to the hospital. At 7 p.m. he was restless, and with difficulty kept in bed; his lips livid; breathing hurried; pulse soft; skin warm; pupils dilated. When roused he did not speak, but stared vacantly, and seemed in a state of madness. The bowels moved involuntarily.

At midnight - Not so restless; lies in a stupor, but when roused stares wildly.

5th. - At 10 a.m. more sensible; is very cautious before he drinks; bowels moved twice.

Noon. - Somewhat rallied, but still wild, restless, and insane; the tongue cannot be seen; pupils natural.

4 p.m. - Quieter and sleepy. Being roused, he moans, and complains of pain in the left side; the breathing is laboured, but less hurried; the face flushed; the tongue, protruded with difficulty, is swollen, white, and blistered; a short cough; much mucus in the throat, raised with freedom; the tip of the nose very red; eyes natural; pulse soft, feeble, 78, much accelerated by slight exertion. The cutaneous sensibility greatly exalted: when touched he manifests great uneasiness; the slightest pressure on any part of the abdomen causes great pain; no hardness or distension; urine clear; penis retracted; the surface of the body cool. Being left alone he is soon asleep; moans and breathes heavily. Purgatives and enemata have been given with difficulty. He is now ordered magnesia, ammonia, and effervescing draughts.

6th, 8 a.m. - Looks worse; breathing short; face flushed; mouth parched; thirst. Great pain in the left side, it is very tender when touched; cannot bear to be moved, nor to drink any thing

hot; tongue white, its edges ulcerated; much rattling of mucus in the trachea; pupils natural; pulse feeble; belly very tender. Ordered twelve leeches to belly; blister to chest; purgatives - Castor-oil, Calomel, &c.

Evening. - Breathing laborious, hurried, with loud tracheal rattles; the tongue moist, white, its edges sore; pupils natural; face, nose, ears, and lips, excessively hot and flushed; skin hot; abdomen excessively tender; pulse soft, greatly accelerated. Lies in a state of stupor; sleeping much; expectorates a white frothy phlegm; desires cold drinks.

At midnight, and at 3 p.m. this day, passed motions dark-brown in colour, containing much mucus, and small pieces of the root.

7th, 8 a.m. - Slept at intervals, and seems better; less flushing in the face; breathing easier; tongue white; pulse fuller, about 100; tenderness of the abdomen. Had two motions: one, very bilious, contained smaller particles of the root. Continue the Calomel Pill. Milk diet; demulcent drinks continued.

6 p.m. - Passed two motions this day; each contained many particles of the root. Breathing easier; less fever; belly tender; pulse soft, 120.

8th, 8 a.m. - Slept well; tongue moist, coated, red at the tip; belly extremely tender; hot skin; breathing easier; makes water with pain; the urine clear, high-coloured; no motion since yesterday; expectorates a heavy greenish-yellow matter; cough less frequent. Castor-oil, with mucilage, repeated, and the antimonial mixture every two hours.

1 p.m. - No motion; belly very tender; increased flushing of the face and heat of skin; tongue white, rather swollen; pulse soft, 112; is hoarse. Pressure on the throat gives pain; it is sore when he swallows; frequent cough, with copious purulent expectoration. Pergat medicamentis.

6 p.m. - Less fever; breathing easier; had one motion, light brown in colour; cough and expectoration frequent; micturition painful. Low diet; blister to back of neck.

9th, 8 a.m. - Had one motion during the night; headache; great tenderness in belly and side; tongue coated white, its edges red; still hoarse; breathing easier; has fever. Saline mixture every four hours.

9 P.M. - Had no motion to-day; abdomen tender; breathing much shorter; face flushed; skin hot; tongue white, red at the tip. Ordered - Calomel, with Castor-oil mucilage, and Tr. Op. Hot fomentation to the belly.

10th, 10 a.m. - Sleeps much; face livid; pulse feeble, 120; breathing quick; still very hoarse; spits a large quantity of heavy purulent mucus; bowels not open; micturition easy. Repeat the Calomel, with Castor-oil and saline mixture.

Noon. - The breathing more oppressed, and the countenance greatly congested. Was bled to 12 ozs., and ordered Antimonial Mixture every two hours, and an Enema.

10 p.m. - Passed three motions containing much mucus; belly tender; is very hoarse; spits the same yellow matter, &c.

11th, 10 a.m. - Face congested; sleepy; breathing laborious; pulse soft, feeble, very frequent. Seven motions during the night. Ordered a cordial draught; wine and sago, &c.

12th, 10 a.m. - Looks worse; face livid; eyes half closed; is sleepy, breathing short; is very weak; has diarrhoea; the belly very tender and painful. Ordered wine and sago, and Carbonate of Ammonia; 1 gr. Calomel every two hours.

10 p.m. - Sleeps much; eyes very much sunk; breathing very short; cough; expectorates with great difficulty the same dark-greenish matter; is delirious; face more flushed.

13th, 10 a.m. - Still delirious; sleeps much; slight mucous rattle in the trachea; cannot expectorate; is fast sinking.

Noon. - Much worse; rattling increased. Died at 3 p.m.

This young man was bled largely the first day, but during his subsequent illness the extremely irritable condition of the nervous system, and the severe bronchitis, prohibited active depletion. The post-mortem inspection shewed that many important organs were very seriously injured. The trachea and bronchi were injected, and the smaller bronchi filled with mucus. The left pleura was lined with lymph, and its cavity filled with serous effusion. The stomach and intestines were pink on their external surface, the intestines glued together by adhesive matter; and there was much peritoneal effusion, with flakes of adhesive lymph. The mucous membrane of the stomach and bowels was softened, thickened, and everywhere coated with an abundance of mucus. On washing this off, the membrane was much injected. The vessels of the brain were more injected than usual, and there was slight serous effusion beneath the arachnoid.

Abel Burgess: first fell convulsed on the deck of the vessel: was bled very largely, had emetics, the cold affusion, the stomach-pump, and subsequently stimulants.

Feb. 4th, 6 p.m. - Still slightly collapsed; loud rattles in the trachea; countenance anxious, depressed; complained of pain in his breast; breathing short; tongue swollen. Ordered a strong cathartic, and an enema of salts and senna, with occasional doses of ammonia.

10 p.m. - Countenance improved; is warmer; the pain is more severe in the right side; the rattles in the throat louder. Ordered a mustard-poultice, and as before.

Midnight. - The pulse stronger; pain in the head; more restless; breathing short. On admission he passed a natural motion. None since.

5th, 10 a.m. - Feels better; pain in the head; slight pain in right side; tongue clean, swollen; the rattles still heard. At 4 a.m. he had two motions, both of which contained much of the root.

Noon. - Is hot and feverish; the respiration hurried; pulse frequent and feeble; still complains of pain in the side; pain in chest gone; tongue red at the tip.

4 p.m. - Face swollen, flushed; eyes injected; pupils natural; tongue moist, clean; much mucus in the throat; coughs slightly, and expectorates with difficulty a reddish mucus; the cough gives pain in the region of the liver and in the head; pulse full, 120; thirst; abdomen soft, without tenderness; semipriapism. Passed a pint of urine, reddish, and depositing a copious white sediment; feet warm; the bowels not moved, since morning. Repeated the Enema.

6th, 8 a.m. - Bowels have acted, and he feels better, but still has pain in the head and right side; respiration hurried; slight rattling in the trachea; urine reddish.

8 p.m. - Respiration less hurried, but coughs more; rattling in the throat declining; expectorates a thick reddish mucus; pain in the side; urine thick, high coloured; had two fluid motions. Ordered castor oil, and to take calomel every three hours.

7th, 8 a.m. - Passed a good night; four motions, partly bilious; abdomen free from tenderness; expectoration bloody; pulse frequent, soft; tongue white; skin warm; the rattles gone. Continue calomel, &c.

6 p.m. - Breathing short and hurried; pulse 120; cough increased. Bled to 10 oz. and continued the calomel.

8th, 8 a.m. - Has passed more of the root; breathing easier; cough and expectoration as before; tongue clean; urine dark in colour, with sediment; slight rattling heard this morning. Antimonial mixture, &c.

1 p.m. - Has passed another motion containing some root; pulse 108, soft; on the right side of the chest there is dullness on percussion, the natural murmur wanting, a short bronchial sound; on the left side, sonorous rattles, the heart's action quick, weak, with a thrilling sensation communicated to the hand; tongue white; face flushed. The bleeding repeated. Pergat caeteris.

6 p.m. - Breathing with more ease, but the right side still painful.

9th, 8 a.m. - Breathing easier; cough less; tongue clean; countenance improved; sputum less bloody; face not flushed; thirst gone; is very weak; there is great tenderness on the right side; has had one motion, thin, yellow in colour, mixed with black or dark brown specks, the remains of the root. Ordered saline mixture every four hours.

10th. - Tongue moist; skin cooler; pulse soft, 90; breathing short: cough troublesome; sputum dark, but not so bloody; still a little pain in the right side; bowels not open. Ordered castor oil, and a blister to chest.

10 p.m. - Cough distressing; breathing short; tongue coated, moist; expectorates a less bloody mucus; moans considerably. Ordered antimonial mixture every two hours.

11th. - Breathing short and difficult, especially when he is moved; cough troublesome; tongue clean, moist; skin not so hot; sputum less bloody; had nine motions during the night. Suspend the antimony; give him a cordial draught and salines.

12th, 10 a.m. - Breathing easier; cough troublesome; expectoration copious; a pain in the right side; tongue clean, moist; abdomen tender; had four motions. Ordered 1 grain of calomel every three hours.

13th, 10 a.m. - Breathing more oppressed and difficult; countenance anxious; is restless, endeavouring to get up; face a little flushed; tongue clean and moist; is drowsy; the pain in the right side has increased; expectoration very copious, loose, and less bloody; urine plentiful, and still thick; had two bilious motions in the night; feels himself worse. Ordered to continue the calomel, and a blister.

8 p.m. - The cough and breathing easier; countenance improved; expectoration easy, and becoming white; has passed three bilious motions. - Pergat.

14th, 10 a.m. - Is worse; breathing more difficult; pulse feeble; features anxious; expectoration easy and copious; rattling in the trachea; tongue clean, moist; had one motion, dark and bilious. Ordered wine and sago, and to continue the calomel.

6 p.m. - Approaching delirium; restless; pulse very small and feeble; breathing short; countenance anxious; had three motions during the day, dark and greenish. Ordered ammonia and stimulants.

10 p.m. - Appears to be fast sinking; the countenance pallid; eyes half closed; cannot lie down; loud mucous rattles in the trachea; expectorates with great difficulty. Ammonia and wine freely.

Midnight. - Still sensible; much weaker; rattles louder; breathing shorter.

15th. - Sat up in bed till half-past 2 a.m., when he laid back on his pillow, and instantly died quite easy.

On examination of the body there was found a considerable development of the papilla; at the root of the tongue, and of the mucous follicles throughout the oesophagus, stomach, and intestines. The surface of the mucous membrane was lined with a tenacious secretion, which, being washed away, presented the membrane itself, thickened, softened, and more than usually vascular. The lining membrane of the trachea and bronchi was deeply

injected, the smaller tubes being choked with a frothy bloody mucus. The lower portion of the right lung in the state of red hepatization. Both lungs were heavy, contained much blood, and interspersed throughout their substance, but especially in the right, were various spots of ecchymosis from extravasated blood - probably effused during the primary convulsions. The right pleura was adherent, and lined with the products of recent inflammation; and in the back of its cavity there was considerable serous effusion lying upon a surface covered with fibrinous lymph of a pale straw colour. The pericardium was largely distended with a greenish coloured serum. The vessels of the pia mater were fuller than usual. The brain was not unhealthy; it presented rather more bloody points, and there was also slight serous effusion.

In this, and the former patient, the tremendous shock which the powers of life had sustained by the first direct operation of the poison, and probably its continued influence in proportion as it was digested in the body, appeared to render the state of reaction one of peculiar irritability and danger. There was a tendency to swooning and collapse; a variableness in the condition of the pulse, the respiration, countenance, and temperature, that seemed to prohibit further depletion till two or three days had elapsed; and the local inflammations which successively arose in different organs were not afterwards controlled by the liberal use of the ordinary remedies.

The remaining patients did not suffer any urgent symptoms: under the free use of purgatives they passed considerable quantities of the root, and were in a few days discharged.

Examination of Wilkinson (No. 1), 47 hours after death.

The appearance of the body very stout and muscular; extremely rigid; the fingers stubbornly contracted; the thumbs turned in upon the palm; the nails blueish. General lividity, not very intense, but in patches anteriorly, while the whole dorsal surface presented a deep purple hue, except in the hams, where the hue was redder, and on the parts subjected to pressure, as the scapulae and nates, over which it was absent. The scrotum and penis slightly livid; the former not distended.

The countenance livid, somewhat swollen, especially beneath the jaw; the eyelids somewhat open; conjunctivae slightly congested above and laterally; slight opacity of the cornea; the pupils dilated, the irides being about a line in breadth; the lips, gums, and ears purple; a frothy secretion filled the nostrils; the tongue bitten at the tip, with an appearance of blood between the teeth.

The chest flattened, contracted above, duller than usual on percussion; there was unusual distension and resonance of the abdomen, especially in the epigastric region.

On dividing the scalp, fluid blood escaped more freely than usual; the pericranium natural; the skull very thick: on the interior of the skull were a few injected veins: the dura mater surface was thought to be not much injected; the longitudinal sinus contained only fluid blood, not the slightest trace of a coagulum. The veins of the pia mater had a natural appearance; they certainly were not distended, as they did not reach a level with the top of the convolutions. Not more than the usual quantity of blood in the sinuses, but it was of a very black colour and perfectly fluid. There was a slight degree of serous effusion, a clear gelatinous deposit under the arachnoid, and some globules of air were seen in the veins. The processes of pia mater dipping between the convolutions were darker than usual; the plexus choroides also darker, being of a plum or damson colour. The cortical structure of the cerebrum was not redder than is usual in recent brains; more bloody points were seen in the centrum ovale; no serum in the ventricles; some veins were ramifying on the corpora striata; the substance of the corpora and thalami were thought to be slightly redder than usual. The veins and sinuses beneath the posterior lobes of the cerebrum were fuller; the veins on the pons varolii, the

medulla oblongata, and about the roots of the nerves, turgid. The substance of the cerebellum, pons, and medulla, was somewhat redder than usual. On dividing the veins and arteries of the spinal marrow, a quantity of fluid blood flowed into the base of the skull. No water at the base.

The veins beneath the integuments of the back were congested. On opening the vertebral canal the theca spinalis had a reddened appearance; the vertebral vessels were injected; the veins and sinuses filled with black fluid blood; the substance of the spinal marrow, especially its internal structure, redder than usual; at the lowest portion, in the lumbar region, there was a little serum.

The tongue was large, and covered with a white fur; the papilla; at the base remarkably elevated and vascular; the soft palate, tonsils, and pharynx, covered with a glairy mucus, and presenting a general blush of dull and somewhat livid vascularity, deepest in those parts where the fluid gravitated, as in the little cavities between the epiglottis and the tongue. The epiglottis dull, with vascular lividity, turgid veins being seen upon it. The pharynx and oesophagus had a white appearance, contained some mucus, and portions of the root.

The trachea and bronchi were lessened in diameter, appearing contracted, and the lining membrane intensely injected with dark blood. This injection was partly concealed by a thick smearing of reddish mucus, which also filled up the smaller bronchial tubes. The lungs were purple and heavy, being gorged with fluid blood; and there were several recent small extravasations of blood scattered through their substance.

The stomach and intestines externally were pink in colour and distended with air; the stomach also contained a little fluid, some of the root, and was, with the intestines, every where lined with a thick viscid mucus. The mucous membrane was thrown into folds, forming prominent ridges, intersecting each other like meshes. After washing away the mucus, when the membrane was placed under water its surface had a mammillated appearance, the follicles being particularly distinct, erect, and abundant. Held up before the light, the pink colour of the tunics deepened by the action of the atmosphere upon the dark blood in the vessels; there were also minute points of extravasation, and dark lines in the course of the venous trunks.

There was a great deal of mucus, and minute portions of the root in the small intestines, especially in the lower part of the ilium. The state of the heart was natural, but the blood found in it, and also in the great vessels, was very black and fluid. No trace of decomposition had occurred.

The second body examined was that of Peter Knight (No.2), which presented similar external appearances, and was thought to be equally livid, but had somewhat less muscular rigidity.

A greater quantity of blood than is usual flowed from the incisions made in opening the head and spine. The principal abnormal circumstances noted on this inspection were the veins of the pia mater very much distended, causing extensive arborescence both on the surface and between the convolutions of the cerebrium. The plexus choroides had a dark damson colour, the velum interpositum much injected, and many vessels ramifying upon the corpora striata. The veins of the cerebellum, at the base of the brain, and the basillary veins, were also in an equal degree distended. The tentorium was extremely blue in colour, not from extravasation, but from great injection.

The substance of the brain in all its parts was more vascular, and exhibited more bloody points in the sections, as did also the pons varolii, medulla oblongata, and spinal marrow. The roots of the nerves were also red from injection; the sinuses of the spinal marrow gorged. About two drachms of serum in the ventricles; four drachms were collected at the base; and there was also general, but not great, effusion under the arachnoid.

A slight contusion on the soft palate had resulted from the passage of the stomach tube, but the whole of the throat, the root of the tongue, the glottis, and epiglottis, were much reddened; the follicles at the base of the tongue were particularly large and prominent. The oesophagus reddened through its full extent; at the lower end the cuticular lining with its fimbriated edge particularly evident.

The glottis and sacculus laryngis were lined with frothy mucus; the trachea most intensely injected of a deep purple almost black colour. The bronchi were similar in colour, and plugged by mucus. The lungs were very dark, extremely congested, and in many places apoplectic effusions had occurred.

The peritoneal coat of the stomach had a pink colour, especially intense about the cardiac orifice. Large black veins were running along its lesser curvature, and branching down its sides. The mucous membrane thickened thrown into large rugae follicles prominent with vascular apices, and of a pinkish colour, pyloric contracted: there was much extremely viscid mucus strongly adherent. The state of the intestines similar to that described in the last case.

The body of "Wilson" (3) was also examined, and we noted in the head and spine the same appearances.

In the mouth and throat, the papillae of the tongue remarkably enlarged. In the fauces, pharynx, and larynx, a remarkable vascular lividity, most intense about the epiglottis and soft palate. The sacculus laryngis and trachea contained frothy mucus; the lining membrane of the trachea also highly congested, thickened, and presenting the same characteristic, though rather less distinct, appearances than the others.

There was an accidental effusion of blood behind the oesophagus, and between its tunics at the lower part. The stomach contained a pint of turbid fluid, with some portion of the masticated root. The stomach and intestines both exhibited the same pink colour externally. The bronchi were likewise congested. The lungs were extremely livid; fluid blood and serum freely flowed from every incision. In some parts the congestion was as great as in cases of pulmonary apoplexy. The follicles in the oesophagus and stomach very distinct. There was a large quantity of viscid mucus in the stomach, especially near the pylorus.

The only difference noted on the inspection of the body of Jones was the presence of a layer of extravasated fluid blood beneath the pia mater covering both hemispheres of the cerebrum. The colour of the membranes was quite blue. The effects upon the other organs were quite answerable to those already related in the other cases.

From what has been related, it appears that the effects which the oenanthe produced in these cases were a violent irritation of the mucous membrane of the oesophagus and stomach, more particularly of the follicular structures, and a state of severe and universal spasm of the muscular tissues; it also induced insensibility, coma, delirium, extreme congestions of internal organs, and, in those cases immediately fatal, it occasioned permanent fluidity of the blood.

The first indication of treatment was doubtless to evacuate the stomach; but, as its sensibility was destroyed, and the poison was taken in the solid form, this could not readily be accomplished. Large and immediate depletion seemed to be essentially useful, by removing the imminent danger of extravasation from over-distension of the vessels; the cold affusion was also beneficial in rousing the patient, so as to make him sensible to the emetics, and so were purgatives during the after treatment.

Called thus in a moment to so many urgent cases of poisoning, it became needful to use such remedies as were at hand, but upon reflection it seems to me proper, in similar circumstances, to rely chiefly on emetics given early, on large blood-letting immediately employed, and the

cold affusion.

Although the attempt to re-establish respiration by tracheotomy failed in the case selected for it, in consequence probably of the great effusion of blood afterwards found on both hemispheres of the brain, yet it is worthy of a future trial in single cases, where it can be more conveniently practised.

Considering the great activity of this poison, that it is capable, as we have seen, of extinguishing the life of a strong young man in full health in one hour, and that many other fatal cases are recorded, it is rather singular that the nature of the active principle of the oenanthe is not yet well known, or the plant applied to medicinal use."

(P. Bossey, Poisoning by *Oenanthe crocata*, The London Medical Gazette, New Series, Vol. 2, London 1844, p. 288-295)

1845 - Un meunier avait inculpé sa femme d'avoir tenté de lui empoisonner à l'aide de la racine de l'oenanthe crocata - M. Toulmouche

"Tout récemment une femme Potier, fut traduite aux assises du département d'Ille-et-Vilaine, inculpée d'avoir tenté d'empoisonner son mari à l'aide de la racine de l'*oenanthe crocata*, connue dans diverses localités sous les noms de *painpain*, de *parsacre*, de *pensacre*, de *persil laiteux*, de *pinpin*, et dont la racine est connue sous le nom de *navette*, de *pain frais*.

Cette plante, qui se trouve dans diverses prairies, a pour racine une espèce de navet qui a des propriétés très-actives: elle paraît avoir dans les environs de Bain, canton de Reden, Ille-et-Vilaine, une triste célébrité, elle passe pour recéler un poison aussi actif que l'arsenic, est cette réputation a grandi, parce qu'un jeune homme s'en servit, vers la fin de 1843, pour se donner la mort.

En 1844, le sieur Potier, meunier, accusa sa femme, dont la conduite était tout-à-fait déréglée, d'avoir commis sur lui une tentative d'empoisonnement, à l'aide de la racine d'oenanthe, en faisant entrer dans sa soupe de cette racine; mais il fut mis en garde contre les dangers qu'il courait, parce que cette racine n'était pas cuite comme les autres légumes et parce qu'elle est très-âcre.

Potier, en disposant sa plainte, remit au juge instructeur des racines semblables à celle qui aurait été introduite dans sa soupe; ces racines furent soumises à l'examen de MM. Malaguti, Pontalié et Toulmouche. M. Toulmouche, devant la cour, fit connaître que les racines que les experts avaient eu à examiner, étaient celles de l'oenanthe crocata de la famille des ombellifères, que cette plante est placée parmi les poisons narcotico-âcres, est que cette racine, d'après les expériences de divers toxicologues, notamment de Walton, d'Orfila, peut donner la mort en deux ou trois heures.

Malgré les efforts du défenseur de la femme Potier, cette femme a été condamnée à dix ans de travaux forcés."

(Tentative d'empoisonnement par l'oenanthe crocata, Journal de chimie médicale, de pharmacie, de toxicologie, 3^e série, tome 1, Paris 1845, p. 533-534)

1847 - The deleterious effects of the Oenanthe Crocata, exemplified in a number of instances, as it occurs in the South of Ireland - William Pickells

"In Sowerby's English Botany, the letter-press of which is by Dr Smyth, it is stated, that "the *Oenanthe crocata*, the most virulent, perhaps, of all the British poisons, according to Dr Smyth, (Dr Pulteney had before expressed a like opinion), "is happily of rare occurrence." The observation may be true with regard to great Britain, but unfortunately applies by no

means to this country; the frequency of its occurrence, coupled with its very deleterious effects, counterbalancing in no inconsiderable measure the boasted exemption of Ireland from poisonous reptiles. Mackay, in his Flora of Ireland, states it in general terms as “frequent,” that is, as frequent generally throughout the island. In this part of Ireland it is known under the provincial names, water-parsnip, and “macken-thaou,” the Irish name signifying water-parsnip or water-root, the root being always immersed in water. In Connaught, the late Professor Wade, of the Dublin Society, found it, as I heard him state in his lectures, “frequent,” under the Irish name “thaou,” an abbreviation by aphaeresis from “macken-thaou.” Mr Drummond, curator of the late botanic garden near this city, now colonial botanist at the Swan River, found it frequent all over the south of Ireland. In this county it is quite common, obtruding itself even within the precincts of this populous city, and marking from time to time its deleterious effects, by the deaths of one or more individuals of its population.

In the month of August of 1842, three boys, the eldest aged 13, named Evans, Lane, and Allen, belonging to the Foundling hospital of this city, died in consequence of having eaten of the root, which they had plucked in the first field, on the river side, beyond the Weirs, whither they had gone accompanied by a number of other boys for the purpose of bathing. They were attacked while on their return home, having gone only a short distance, when the eldest, Evans, the first attacked, “gave a leap” and then fell, receiving in the fall a severe injury of the forehead. In the act of assisting or endeavouring to raise him the other two boys also fell. Two, Lane and Allen, were removed to the dispensary, and Evans to the foundling hospital. Emetics and other means were tried without effect. In one instance, owing to the spasm of the jaw, no emetic could be introduced. They lived only a few hours after the ingestion of the poison. They had pulled up the plant “for making pop-guns and flutes,” its hollow stalk resembling that of the cow-parsnip, which, from its calibre, is much used by boys for these purposes. The portion of the root which they ate, did not, I was informed, exceed “the size of the tip of one's finger.” In the cases of Lane and Allen it was observed that the access of the convulsions, which were alternated with sopor, was always preceded by an acceleration of the pulse. The convulsions were not of the body but of the mouth, face, and extremities. There was much dilatation of the pupils and redness of the eyes. Evans seemed “rather mesmerized than comatose.”

In the summer of the year before last, June 1841, two boys, one aged 13, the other 11, who had been bathing at the Weirs, near the scene of the former occurrence, ate of the root and were attacked before they left the spot. The first attacked was seized with vertigo and fell; the other, while in the act of endeavouring to place him on his back, for the purpose of bearing him within the reach of assistance, fell also. Fortunately two men who happened to be swimming near the place, came to their assistance, and they were removed to the dispensary, where, under medical treatment, they both recovered. A boy elder than either had pointed out the root as the pignut, (*Bunium flexuosum*,) when one of them tasting it and finding it sweetish, said, “he would eat plenty of it, as he had eaten no breakfast that morning.” Though the plants are of the same natural tribe, it seems difficult to understand how even boys, - for this was by no means a solitary instance, - can mistake the root of the *Oenanthe crocata*, which resembles that of a parsnip, for that of the pignut, which, from its very diminutive size and roundish figure, is graphically called in Irish by a name signifying “fairies' potato.”

In the spring and summer of 1838 two deaths occurred, one that of a woman, the mother of a family, who lived at Newmarket, in this county; the other that of a boy, four years old, who lived in the north suburbs of the city. The following is the account of the occurrence at Newmarket, taken from the Cork Constitution newspaper of April 27, 1838. “On Wednesday last, a poor woman residing at Granavary, near Newmarket, met with an untimely death in consequence of having eaten some portion of water-parsnip, which it appears had been gathered by the directions of some ignorant empiric for medicinal purposes. The poor creature

not knowing anything of its poisonous quality, put a small bit of the root in her mouth, and having swallowed it, declared to two or three others who were by, and who also eat of a little, but who eventually recovered, under medical treatment, that it “warmed her stomach very much.” A larger morsel was then taken, soon after which she complained of giddiness, &c., and immediately fell to the ground. She then became violently convulsed, and in the space of one hour was a corpse.”

Passing to the occurrence in the north suburbs, five children in the month of August having partaken of the root were seized with convulsions and other symptoms of vegetable poisoning. Four were saved by medical treatment; but the fifth, a fine boy four years old, died. In this instance, as well as in that of the poisoning at the Weirs, the plant, a portion of the root of which had been eaten, was brought to me, and proved to be the *Oenanthe crocata*. In the present instance it had been gathered on the Mardyke Walk for a poultice, this very noxious plant obtruding itself on the favourite public walk of this city, fringing it, as it were, in many places, at the water's edge! After having been used as a poultice it was thrown into the sink, when the children picked it up, mistaking it for the refuse of some esculent. The root wrapped in a cabbage leaf, roasted in the ashes, and then applied, is much used by the poorer classes as a discutient for tumours.

My attention was first directed to the plant by a case which came under my observation in June 1819, while attached to the dispensary of this city, that of a boy named Clear, who, amusing himself in the fields contiguous to the Mardyke, with other boys, in “picking pig-nuts,” dug up by mistake a root of this plant, and finding it sweetish upon tasting, was tempted to eat of it. In about half an hour after he was seized with pain of stomach, and, while hurrying home in the utmost alarm, fainted, and fell into convulsions on the way. Removed to the dispensary, he lay for some hours in a state of stupor, the pupils of his eyes dilated, foaming at the mouth, and with the abdomen greatly distended. Strong emetics of ipecacuanha and of tartar emetic were successively exhibited without effect. A strong solution of sulphate of copper was next given, which also failed. Vomiting was at length produced by an infusion of camomile and castile soap. Upon the evacuation of the stomach, the bowels were freed by an enema of four ounces of oil of turpentine. On the following day I saw him at play, quite recovered, with other boys in the street. The plant of the root of which he had eaten was pointed out to me on the spot after the occurrence, and proved to be the *Oenanthe crocata*.

A boy of nearly the same age, who took, as he himself informed me, as much or even more, experienced no ill effects. Upon inquiry I learned that a few years before, two boys, one of 10 or 12, the other of 6 or 8 years of age, died from having eaten of the root, gathered in an adjoining field. They both fell, seized with the symptoms of poisoning, while yet in the field. Dr Reid, who saw them on their way to the dispensary, to which they were conveyed, informed me that one of them was then apparently dying, being “deadly cold and pale; pulse scarcely to be felt.” The other still laboured under convulsions. There was much excoriation and inflammation of the mouth, implying, as he thought, that they must have swallowed a considerable quantity of the poison, which, though sweetish upon tasting, has been appropriately classed by toxicologists among acrid narcotics. Some years previously, two children of a baker, who resided in Barrack Street, died, I learned, of the effects of having eaten of the plant, gathered somewhere in the neighbourhood.

In the summer of 1826, there was received into the South Infirmary of this city, the case of a boy who had found the root on the Glanmire road, within the precincts of the city, (having been thrown out from an adjoining garden,) and who had eaten of it, mistaking it for a parsnip. It having been found difficult, or rather impracticable, (as one of the physicians to the establishment, Dr Herrick, informed me,) to introduce emetics by the mouth, in consequence, notwithstanding the use of a dilator, of the spasm of the lower jaw, a solution of 8 or 10 grains of tartar emetic, in half a pint of water, was given as an enema, which had the effect of

unloading the stomach. When the spasm of the jaw had relaxed, castor oil was given by the mouth. The warm bath was subsequently resorted to. The dilatation of the pupils as well as the stupor continued for several days, and the debility still longer confining him to bed.

In the spring of 1827 four children were poisoned at Imokilly, in this county, by eating of the root. The following is the account taken from the Cork Southern Reporter of May 3d 1827, headed, "Caution to parents." - "A respectable correspondent has furnished the following most shocking occurrence. On Saturday last, four children, from the age of eleven down to five years, belonging to a man named Draddy, otherwise Aher, living at Knockadoon, in the parish of Kilcredon, and barony of Imokilly, in this county, were poisoned by eating a quantity of the wild parsnip root. They were dreadfully convulsed for some hours, and died in the most excruciating agony. This poisonous weed is generally found in the moist grounds, growing among water cresses." The plant here meant is, of course, the water parsnip (*Oenanthe crocata*), which is frequent in the barony of Imokilly. The knowledge of the fact of its growing among water cresses may suggest a useful caution. In spring, before the plant has flowered, the young leaves or tops may be mistaken for those of the water cress, though the water cress belongs to a different tribe, the *Tetradynamia*, or *cruciform*. In England, a plant nearly allied to the *Oenanthe crocata* in its botanical characters, the *Sium nodiflorum*, or procumbent water parsnip, has been denounced in systematic works as a dangerous plant, growing among water cresses.

In the summer of the same year with the occurrence in Imokilly, the mother of a family, living at Inniscarra, three miles from this city, having brought home several of the roots for the purpose of making a poultice, one of the children, a boy, ate of one, mistaking it for a parsnip, and was seized in consequence with convulsions and tumescence of the abdomen. Among other means successfully employed for his recovery by a medical gentleman, who happened to be in the neighbourhood, was that of making him swallow a considerable quantity of melted butter. The good effects of melted butter are also attested by Dr Smyth in his History of Waterford, who says that - "A woman living in the town of Dungarvon, having brought home a root of the plant for a poultice, one of the children ate of it by mistake for a parsnip, and was seized in consequence with *risus sardonius* and other symptoms, but recovered by the administration of melted butter."

In March 1830, two sisters, one aged 18, the other 16, were poisoned by eating of the root, at Innishannon, within ten miles of this city. This event I casually learned in conversation, it not having been communicated in any of the public prints, rendering not improbable the fact that in country districts cases of this sort occur which are never heard of by the public. The following are the particulars as given in answer to my inquiries by the Rev. Mr Crowley, then parish priest of the place.

Courceys, May 10, 1830.

DEAR SIR, - I have inquired respecting the two sisters who lost their lives by eating of the water parsnip or "macanthauou." It happened about the end of March, in the parish of Innishannon, about half a mile below Shippool. Their name was Murphy, one 16 years of age, the other 18. They belonged to the parish of Knuckavilly, and came there to pick what is commonly called "dhoolemaune," on the banks of the river Bandon, in the place already mentioned. They were immediately attacked by the most violent convulsions, and expired in less than an hour after taking the poison. Medical assistance was sent for to Innishannon; but the action of the poison was too rapid. They mangled their tongues in a shocking manner. There was with them another girl, who tasted the poison, but threw it out of her mouth. Nothing happened to her. The poor creatures were hungry at the time. Where it happened was opposite Ballinadee parish."

- Yours, &c.

D. Crowley. Dr Pickells, Cork.

Happening to mention to Mr. Malet of this city, father to the Rev. Mr. Malet, F.T. C. D., whose family formerly resided at or near Innishannon, the occurrence just detailed, he said, that he well remembered to have heard, when a boy, from his father, that two or three children, brothers, died in consequence of having eaten of the water parsnip, commonly so called, which they had mistaken for the wild parsley, and gathered somewhere in the neighbourhood.

It may be worth remarking that Mackay, in his Flora of Ireland, states some old castles in the county of Cork as the only locality in Ireland in which the wild parsley is to be found. The two sisters in the account given had, it is said, come to pick "dhoolemaune." This is a species of sea-weed, the *Fucus nodosus*, the tops of which are gathered in the spring season by the poorer classes living on the sea side, and boiled as food. It is of so leathery a texture, that it seems wonderful how even boiling can so soften it as to render it edible by human beings. It is the species of fucus which in commerce affords most kelp. It is sometimes laid out on the land as manure. In a report of the House of Commons, published a few years since, it is stated, as a proof of the then prevailing distress, that "in a whole district of Ireland, the poor were detected in taking for food the sea-weed which had been laid out upon the land as manure."

In April of the year now passing (1843), three persons were poisoned in the north of Ireland by having eaten of what, from the Irish name assigned, "dahoe," (evidently a corruption of "tahoe,") may be fairly pronounced to have been the *Oenanthe crocata*. The following is from one of the numbers of the Derry Journal for April last. "A labourer of the name of John Magennis, who resides near Redcastle, in the county Donegal, was digging over some ground in his garden on Saturday the 8th inst., for the purpose of planting potatoes, when he turned up a root of a large size. His wife supposing the root, which was either hemlock or fool's parsley (their botanical characters being nearly the same, and both deadly poisons,) to be parsley, scraped it, and having cooked it, partook of it herself, and gave also to her son, daughter, and sister-in-law. Soon after the daughter became dizzy and fell to the ground. The sister-in-law was next affected in the same manner; and so powerful was the poison that the three died in an hour and a-half after they had partaken of it. The son, a boy about twelve years of age, fortunately did not eat any of it, not having liked the taste of it. It appears that the father, some years ago, found the root on the shore, and thinking it was parsley, planted it in his garden, where it has been growing since.

The name by which this plant is known in Irish is 'dahoe,' which signifies death." Keogh, in his Irish Botany, published upwards of a century since, Englishes the Irish name "dahou" or "tahou," hemlock dropwort or water dropwort; Latin, *Oenanthe cicutae facie*; adding, that "any one who eats much of it dies in less than twenty-four hours." It is said the root was either hemlock or fool's parsley. Now, the Irish name of hemlock commonly so called (the officinal *Conium maculatum*) is "minvar," signifying fatal to man, though much less so than the *Oenanthe crocata*. The *Conium* is an inland plant growing in waste dry places. In regard to the supposition of the root having been the fool's parsley, in the account of the poisoning of the three foundlings last summer near this city, the first supposition, as given in one of the newspapers, but which was afterwards corrected, was also that the root was fool's parsley. Fool's parsley may be readily distinguished from other umbelliferous plants by the involucre. The roots of the *Oenanthe crocata* more nearly resemble (being less fibrous) the roots of the garden parsnip than those of the plant commonly called water parsnip in England (*Sium nodiflorum*) resemble it.

In recording the deaths of so many human beings hurried, by having ignorantly and incautiously eaten of this baleful aquatic, into an untimely grave, I may, perhaps, be permitted to revert to the particulars of an appalling catastrophe which occurred, though upwards of a century and a half since, in the neighbouring county of Tipperary. The communication, in an early volume of the Philosophical Transactions, is from Mr Ray, the naturalist, to Sir Hans

Sloane. "I shall now communicate to you a story or two of the direful effects of the *Oenanthe aquatica*, *Cicuta facie*, *Succo viroso* of Lobel, which we may English, "hemlock water dropwort, upon several persons that ate of the roots, mistaking them for those of the *Sium aquaticum*, or *Apium palustre*, sent to me not long since in a letter from Dr Vaughan, a learned physician of Ireland, living at Clonmel, in the county of Tipperary. "Eight young lads went one afternoon fishing to a brook in this country, and there meeting with a great quantity of *Oenanthe aquatica*, *Succo viroso*, (in Irish, tahou,) they mistook the roots of it for *Sium aquaticum* roots, and did eat a great deal of them. Of the eight, five died before morning. Of the other three, one ran stark mad, but came to his right reason again the next morning. Of another the hair and nails fell off; and the third, who is my brother-in-law, alone escaped without injury. This happened about thirty years ago, but there are many yet alive who assert the truth of it, having been eye-witnesses of this dreadful tragedy. There was also a Dutchman, about two years since, within eight miles of this place, poisoned by boiling and eating the tops of this plant shred into his pottage. He was soon after found dead in his boat; and his little Irish boy gave account of the cause of his death to be eating this herb, which he forewarned his master against, but in vain, the Dutchman asserting that it was good salad in his country; so that, I believe, he mistook it for *Apium palustre*, which its leaves much resemble." (Wild celery). Mr Ray concludes, "wherefore, I think it for the interest of mankind, that all persons be sufficiently cautioned against venturing to eat of this, and, indeed, any other unknown herb or root, lest they incur the same fate, and in order thereto that such histories be made public, and transmitted to posterity." (MDCCV.)

To the fatal instances of poisoning from the *Oenanthe crocata* narrated, may be added the case of a young lad, 7 years of age, son to Mr Barber, a respectable inhabitant of this city, who was poisoned some years since at, Passage, within five miles of the city, by eating of some unknown vegetable which he had gathered in the fields. The newspapers erroneously stated that his death had been occasioned by eating the berries of the deadly nightshade; a plant, with the exception of two spots, the East Ferry beyond Cove, and "the Little Island," not found native in this county. The *Solanum dulcamara*, or woody nightshade, does occur in the hedges about Passage; but its berries are little if at all poisonous. A berry found on his person proved, as Dr J. V. Thomson, F. L. S., to whom it was submitted, informed me, to be that of a species of *Sorbus*, the berries of which, belonging to the class *Eicosandria*, are not unwholesome. It was ascertained, however, that he had eaten a great variety of articles on that day, gathered either in the fields or in the neighbouring plantations.

The humane caution with which Mr Ray concludes his communication cannot be too earnestly impressed, in the peculiar circumstances of this unhappy country, in many parts of which the poor, at certain seasons of the year, are sometimes driven by hunger to eke out a scanty and precarious subsistence on a potato diet, with the wild herbs and esculents of the field, or the weeds of the sea shore. In some of the fatal instances mentioned the poor creatures, it appears, were hungry. How evil an adviser is hunger, "*malesuada fames*," may further appear from the following, stated at a public lecture given in this city about two years since by Mr Murray, an itinerant lecturer from the Anti-corn-law League, as having occurred a short time before, in the neighbourhood of Kilkenny. "A poor man and his wife, reduced to the last stage of destitution, left their cottage at the close of evening for the purpose of begging among the neighbours; but, receiving very little, the cravings of hunger obliged the children to return on the following morning to their cabin, when the first object which presented itself was a hemlock weed. They ate it, and perished."

"Of all the umbelliferous vegetables, the *Oenanthe crocata* (Linnaeus having so abridged the sesquipedalian name of Lobel) seems to be," says Dr Christison, "the most energetic. It is even more energetic than the *Cicuta virosa*." The *Cicuta virosa* does not occur in the south of Ireland, but is found in the north; particularly in the waters about Enniskillen. It would seem,

indeed, to prefer for its habitat the more northern regions, being frequent in Germany, Russia, Siberia, and Lapland. Its English trivial name, cowbane, is expressive of its known effects on horned cattle. Linnaeus, when in Lapland, detected the cause of a dreadful epidemic, which raged there among horned cattle, to be their feeding on the young leaves of the *Cicuta virosa* under water; - more fortunate in the etiology than inquirers into the cause of the epizootic, which at present rages so destructively in this and other countries of Europe.

Wepfer, the Swiss physician, who has written a treatise on the *Cicuta virosa*, says it is fatal also to geese and swine.”

It would appear from what I have heard on good authority that the *Oenanthe crocata* is poisonous to geese. In the west of this county, in a marshy district from which I have opportunities of information, geese are prevented from feeding near the water, lest they should feed on the “mackenthauou,” which is known to be noxious to them. Practical farmers say it is not poisonous to cows, nor, according to *Withering*, to sheep. It is poisonous to horses. Sir James Frankland told Dr Smyth he knew brood mares to eat of the root and to die in consequence. The author of the “Irish Traveller,” a work published nearly a century since, consequently much prior to the publication of Smyth, says, “There is a spring near Mitchelstown in this county (Cork), of which it was remarked, that horses who drank of it were seized with diarrhoea and other violent symptoms;” which he attributes to the great quantity of hemlock water dropwort he saw growing in the spring. The fact, if confirmed by further observation, would seem to exemplify by an additional instance the difference between animal and vegetable poisons: the water of springs infested with the most venomous snakes being drunk with impunity, as was so seasonably experienced by the army of Cato when near perishing of thirst in the burning sands of Africa; the poison of snakes being swallowed without injury, though the slightest drop introduced immediately into the circulation may prove fatal.

The umbelliferous tribe, so called from the form of its inflorescence, the stalks all spreading from a centre, like the ribs of an umbrella, seems to present a striking exception to the doctrine of the correspondence between the qualities of plants and their external form and natural classification, some of our most valuable esculents, as well as the different species of hemlock, belonging to it. Plants of this tribe are, however, a good deal influenced by humidity of soil and cultivation. Some which in their native ditches and marshes are lurid weeds, or partake of a poisonous quality, under the influence of cultivation becoming the food of man, as instanced in celery, which is so wholesome when cultivated in our gardens. Hence, from the common resemblance in physiognomy, or strong family likeness, it has been recommended to avoid all plants of this tribe growing in wet situations. Among the advantages of the erection of the new corn market on Sleigh's Marsh, near this city, may be reckoned as not the least, its having contributed, by the ground necessarily cleared and enclosed for the preparation of its site, to the extirpation of a whole magazine or depot of this poison. Every one must have been struck a few years since by the state of that squalid marsh, bristled and overrun with coarse and rampant weeds, the great mass of which, though supposed to be the wild celery, consisted (intermixed here and there with some plants of the wild celery) of the *Oenanthe crocata*, together with sedge and reeds. Proprietors of gardens sometimes sent there for the purpose of mending their seeds, and large sums of money were, I have been informed, made during the war by selling the seed to military men going abroad. In the spring season herb women have been seen gathering the plants, and after washing and taking off the roots, selling them in the market.

A few summers since an elderly man in the employment of Wright and Morgan of this city, sauntering after dinner into the fields, somewhere in the neighbourhood of this marsh, ate by mistake for the wild celery a portion of the *Oenanthe crocata*, and was seized in consequence with acute pain, vomiting, and cramps, but recovered under medical treatment; his recovery

having been doubtless aided by the advantage of a full meal; a full stomach resisting better the action of poisons of all sorts. As both these allied plants, the wild celery and *Oenanthe crocata*, are maritime as well as inland, being found in salt marshes near the sea coast, it may be not amiss to warn sea-faring persons and emigrants to distant countries against confounding them. Cook in his first voyage says, "After taking a slight view of the country and loading both the boats with celery, which we found in great plenty near the beach, we returned from our excursion" (into a part of New Zealand.) The *Oenanthe crocata* may be mistaken by ignorant collectors of medicinal vegetables for the *Conium maculatum*. A respectable apothecary of this city, whose father and grandfather also practised as apothecaries in the city, informed me, that, having been sent when a boy by his father to collect the *Conium maculatum*, he brought home by mistake the *Oenanthe crocata*, gathered on the Mardyke, for which he was severely reprimanded by his father, who said that he had heard of more than one instance of physicians having lost their reputation and injured or destroyed their patients, in consequence of the substitution in pharmaceutical preparations of the *Oenanthe crocata* for the *Conium maculatum*.

Virulent a poison, as is the *Oenanthe crocata*, it is not, however, in judicious hands, without its medical value, at least in cutaneous affections, hemlock, of one species or the other, having from remote antiquity been celebrated as emphatically "the skin curer." Mason Good recommends it in the cure of leprosy. It is also recommended in ichthyosis. Bell says it is a specific for cancer. I have heard of its being given in drops for the cure of chincough. Gray in his Supplement to the Pharmacopoeias mentions several uses of poultices of the *Oenanthe crocata*. We have before adverted to the use of the root roasted, by the poorer classes in this place as a poultice to tumours. Its use, however, in this way appears to be very indiscriminate and incautious. I have prevented a boy whom I saw gathering the root for a poultice for "a fresh cut." A physician attached to a country dispensary near this city informed me, that a woman in his district applied to a scrofulous ophthalmia with opacity of cornea, a poultice of the *Oenanthe crocata*, which irritated and inflamed the eye most dreadfully, causing the other eye also to swell and inflame. He afterwards applied a poultice of the *Conium maculatum*, which, however, appeared to exert little effect. Hemlock, so far back as the time of Pliny, was supposed "smeared around to restrain pains of the eyes" (cohibere oculorum dolores circumlitus.) It was also mixed with collyria. Given internally in large doses, the *Oenanthe crocata* produces fatal tetanus, as in the instance which occurred in England, related by Watson in the Philosophical Transactions. Though in the following instance, which occurred some years since in Galway, the root is called by the unknown name "cow's foot," there can be little doubt, from the great reputation of the plant among the vulgar in the cure of obstinate cutaneous diseases of all sorts, that it was the *Oenanthe crocata*. "On Wednesday last," (the account is taken from the Cork Reporter, September 12, 1835,) "there occurred in Galway a melancholy instance of the evil effects produced upon society by the rash interference of inexperienced meddlers with medicine. A young man, named John Mackintosh, long afflicted with jaundice, had been prescribed for by some of the faculty in town, but with little effect. He went to see the execution of Ryan for the murder of his wife, and there he met a man who spoke to him upon his complaint, and said he would bring one who had a cure which would restore him to health. This man was brought to him, and got from the garden at Bushy Park the root of an herb, from which he ordered a decoction to be made. He directed the deceased to take one wine-glassful of this, and two hours after taking it, the unfortunate Mackintosh expired in dreadful agony. The medical gentlemen at the inquest tasted the decoction, and it was so acrid and pungent, that a very small quantity of it almost blistered the tongue, lips, and gums, while it left a high degree of heat in the mouth for a long time after. The prisoner who prescribed the decoction calls the root "cow's foot." It must be evident, that, in the hands of the ignorant or unwary, so powerful an agent can only be regarded as "a drawn sword in the hands of a child."

In the present imperfect state of our knowledge of the poisonous principle in vegetables, and of its mode of action on the animal economy, the evacuation of the poison, when poisoning has taken place, becomes evidently the chief indication of cure. Ammonia and other stimulants have been extolled as antidotes for the vegetable alkaloids. But, however useful they may be as auxiliaries, further experiment must determine whether we can trust to them alone. All the cases of recovery which occurred in this city and its neighbourhood (I am aware of about 13,) were treated, from every thing I have been enabled to learn, with emetics, and ammonia, or “cordials,” emetics having been in some instances followed up by enemata, to carry off the last portion of the poison. The acetic or other vegetable acid was given in scarcely any instance.

The use of emetics should be boldly persevered in, and not hastily given up, as, according to Dr. Monro, “The loss of power by the stomach is seldom so great as that vomiting cannot be excited.” Wepfer combats the objection of waiting to give emetics till the convulsions are over, observing that, when the poison is removed, the convulsions cease, the analogy of ordinary epilepsy, in which it is considered the best plan to do nothing till the convulsions are over, not applying. For the extraction of liquid poisons in general, or of substances, as arsenic, or other metallic poisons in which the poisonous matter is soluble or miscible in a fluid, mechanical art has of late years conferred a valuable boon on toxicology, in the invention of the stomach pump. The stomach pump, obviously inapplicable in the strict sense of the word, to the cases mentioned in this paper, may, however, under its improvement of a double action, be made available even in such cases by injecting an emetic solution into the stomach, under circumstances in which it may be difficult or impracticable to introduce them otherwise, owing to the spasm of the jaw, or to the power of deglutition being lost. Wepfer, in his treatise on the *Cicuta virosa*, already referred to, describes an instrument invented by De Graef, a brazen siphon, which he says he found very useful in cases of vegetable poisoning, for the purpose of injecting liquid emetics into the stomach, under circumstances of difficulty, such as stated. Upon inspecting the plate of the instrument in the works of De Graef, (to whose anatomical merits Sir Charles Bell bears so high testimony,) I was struck, though used only for the purpose of injecting, by its similitude to the present construction.

How far the invention of De Graef, and its application by Wepfer, might have concurred in suggesting to Boerhaave the idea of the stomach pump, I leave to conjecture. In some of the cases of recovery mentioned above there were, among other symptoms, vomiting and purging. In the case of the elderly man, there were, as stated, acute pain, vomiting, and cramps. Had these cases occurred during the prevalence of Asiatic cholera in the city, they might possibly have been confounded by the inexperienced with cases of the epidemic. In speaking of the difficulty or impracticability of introducing emetics by the mouth owing to the spasm of the jaw, I might have mentioned, that in some of the instances which came under observation in this place, it appeared to be rather a spasmodic closing of the mouth than lockjaw. In two of the cases of recovery, those of the boys who were poisoned at the Weirs, after the evacuation of the poison, blood was taken from each to the extent of six ounces. In the case of the boy Evans who died, venesection was attempted, but the blood did not flow. Though in scarcely any of the instances of recovery vinegar or other vegetable acid was given, the following is an instance of the good effects of a vegetable acid in a case of poisoning of another sort. A baker's boy drank half a pint of soap leys (of the second ley,) mistaking it in the dark for tea, which his employer used to leave for him, as a drink after coming out of the bakehouse. He was cured, as the attending physician informed me, by lemon-juice, &c. as recommended by Orfila. The stomach pump was introduced in twelve hours after the occurrence, but it was thought to have been useful only by diluting. The action of the poison was so corrosive that a great portion of the mucous membrane of the stomach was thrown up.

Some of those who took the *Oenanthe crocata* escaped it has been stated, by spitting it out.

Others, who it would appear, took as much as those who died, experienced no ill effects at the time, an immunity attributed to idiosyncrasy. Though no immediate ill effects should follow, how necessary it is, when any portion of the poison has been retained, to adopt precautionary measures on the instant, by insuring its total expulsion and not trusting to idiosyncrasy alone, the case of the celebrated founder of Islamism, Mahomet, seems to afford a warning as instructive as striking. "Mahomet," the account says, "by spitting out the greater part of the poison, escaped immediate death," (his companion Bashar had died upon the spot,) "but the fatal drug had entered his system, and, resisting every effort of medicine to expel or counteract it, in somewhat more than three years afterwards it brought him to his end!"

In times of antiquity, hemlock, it is well known, was employed in Greece as a mode of capital punishment. For this purpose a quantity of the juice was always kept prepared by public authority, the necessary dose of which the condemned had to purchase from the executioner, whence the saying that "it was expensive to die by hemlock." What was the particular species employed will perhaps never be determined. The late Professor Wade used to maintain in his lectures that it was the *Oenanthe crocata*. The most poisonous part of the plant, according to Pliny, was the seed. The stem, he says, was in his time eaten even green as a salad at table. Lobel says those who had eaten the *Oenanthe crocata* in salads were almost killed by it. Delirium or madness was so common a symptom that hence the Greek name κωνειον, from κωνος, a cone or top, the whirling motion of which resembled the giddiness produced on the human constitution by the poisonous juice of this plant. Its narcotic action was deemed so powerful as to be taken advantage of in medical practice. Galen says the seeds of hemlock, hyoscyamus, and opium were combined the more effectually to produce sleep. Paris has given a formula in his Pharmacopoeia, combining the three substances. The ancients were acquainted, so far at least as relates to hemlock, with the fact which has been established by the experiments of Orfila and Magendie in our day, with regard to opium, that its energy is increased by being dissolved in vinegar. Galen speaks of an old woman of Athens, who, by sprinkling hemlock on vinegar "aspergens cicutam in acetario," - succeeded in procuring sleep after opium had failed. Another writer of antiquity makes a similar remark.

It was deemed the least acid of all the poisons "minime omnium est acida." Analytical chemistry has discovered in our times that the basis or active principle of the conium is an alkaloid. The ancients, however, connected, it would appear, a degree of bitterness with its flavour, one of the causes assigned for the bitterness of the honey of Corsica being the abundance of hemlock which grew in this land, and on which the bees fed. ⁽¹⁾ Pliny, Galen, and Avicenna concur in recommending wine as the remedy for poisoning by hemlock. Wine was said to be "poison to hemlock," though Pliny says, "given in wine, it is irremediable." Before entering on stimulants and aromatics or alexipharmics, Dioscorides advises that the poison should be evacuated by emetics and clysters. The evacuants recommended by the ancients are, however, (at least compared with those which we possess, drawn from the mineral kingdom,) inert, consisting almost entirely of mucilaginous and oily demulcents. The chief stress appears to have been laid on stimulants and aromatics conformably to their theory, that hemlock killed by excessive cold, congealing, as it were, the blood. Socrates had convulsions. "Cicuta Socratem magnum fecit," says an old writer, alluding to the glory of his death.

(1) Galen says, "the seeds of hemlock are excellent food for thrushes and starns (sturnis)." Mr Drummond observed, as he told me, that the larvae of some insects were peculiarly fond of the seeds of the *Oenanthe crocata*.

Though we have thus pointed out some of the curative measures which may be useful, when the very deleterious substance to which we have called attention has been introduced into the system, it must after all be obvious, that, in a matter so momentously important, "prevention is better than remedy." The consideration should suggest the necessity of extirpating, by every

practicable means, this crying nuisance, this noxious weed, which in so many ways offers a snare to the unwary, reproaching, by its disgraceful frequency, the indolence of man, and showing how much still remains to be done towards ridding the prolific soil of the land from the noxious weeds of the desert. Might not, under the superintendence of the directors of national education, small tracts, as school-books, embodying striking facts and features of local natural history, be made part of the system of national education? In this way some useful practical information may be conveyed, and dangers pointed out and averted. The ancient Persians, according to Xenophon, in his *Cyropaedeia*, made the knowledge of plants part of public education. Contrasting the Persians of his time with those of former days, he remarks, "Formerly boys were taught the qualities of the several productions of the earth, by which means they made use of such as were good, and abstained from those that were noxious. At this time they seem to be instructed only how to do the most hurt; therefore deaths and injuries by poisons are nowhere so frequent as amongst them."⁽²⁾ In other countries of Europe at present, more especially in Germany, there are certain municipal regulations for securing children and others against poisonous plants growing wild or in gardens, particularly in regard to the deadly nightshade, water-hemlock, and meadow saffron.

(2) Even the amusements of boys require supervision and sometimes correction. What led to the fatal catastrophe of the three foundlings was, as stated, their having pulled up by mistake the *Oenanthe crocata* for the cow-parsnip so called, (whether the *Heracleum spondylium* or the *Angelica archangelica*), the hollow stalk of which is used by boys as a pop-gun, through which they blow cherry-stones, haws, peas, or small shot, by means of the breath - an amusement in itself sufficiently mischievous, as it is well known the action of the human breath exerted for a time on a pellet of any sort, as this passes through a long and smooth tube, gives a velocity which will inflict a sharp and painful stroke on a distant animal. In this way, by means of a hollow reed, some of the native American tribes shoot their poisoned arrows with great force and precision without the aid of the bow; the natives also of Borneo and others of the Eastern Islands.

The meadow saffron is not indigenous in this county. It is found as such on the banks of the Shannon in other counties.

We have before stated that the *Atropa belladonna* or deadly nightshade, with the exception of two places, does not occur as a native of this county. During the existence of the late botanic garden near this city, a lamentable incident occurred, which may serve to exemplify the necessity of precautions, even when this plant is cultivated in gardens. A young woman, of rather a respectable class in society, who was in the habit of visiting the garden, was observed by Mr Drummond to take and eat one of the berries. Mr Drummond remonstrated with her, explaining the danger, of which, however, she seemed to make light. On different days afterwards, she took in his presence, notwithstanding his earnest remonstrances, one or more of the berries with impunity, as was proved by her still revisiting the garden. Mr Drummond mentioned the circumstance to me at the time, as a proof that the plant cannot be so pernicious as represented. In this manner she made several attempts on her life; but the last of which only was effective. After taking, it is not known what quantity, she returned no more, having fallen a victim, either to the spirit of rash and idle experiment, or, as there was some reason to suppose, having intentionally destroyed herself in the anguish of unrequited attachment.

Besides the above-mentioned case, which occurred about fourteen years since, the only instance of poisoning from the deadly nightshade which I have heard of as having occurred for many years in Ireland was about twenty years since, at Clongowes Wood, near Dublin, that of Mr Rice, a young gentleman aged about 18 who, having been "picking sloes," gathered some of the berries by mistake, was seized in consequence with "fits," and "died in a couple of hours."

The henbane, though not proscribed in the above list, is a plant which should also be a subject of precaution, at least in these countries. The late Professor Wade used to relate in his lectures an anecdote, as attested by the parish priest of the place, of a whole family living in Lambay Island, near Dublin, having been driven mad, attempting to bite everything which came in

their way, in consequence of having eaten of the roots which had been brought home and boiled by mistake for parsnips. In this county the henbane occurs in different places, as at Youghal, Castle Martyr, somewhere between Fermoy and Lismore. Nearer to this city it is found in the "little island and at Blarney." A few years since it was found in great quantity among the ruins of the old castle of Carrigrohane, within a mile of the city, until rooted up by the herb women, it having been then much in demand as an officinal.

Some years since I was struck by seeing it growing among wild fig trees on the top of the ruined moorish tower on the Rock of Gibraltar, the circumstance naturally recalling at the time the mythological origin of the name "hyoscyamus."

(Deleterious effects of the *Oenanthe Crocata* or Hemlock Water Dropwort, exemplified in a number of instances, as it occurs in the South of Ireland, more particularly in the neighbourhood of Cork. Read in the Medical Section of the British Association, at their meeting held in Cork in August 1843. By William Pickells, A. B., M. D., one of the Physicians to the Cork Fever Hospital. The Edinburgh Medical and Surgical Journal, vol. 67 (1847), p. 435-451)

1857 - Two laborers at West Boldon ate some of the root - Alfred S. Taylor

"In April, 1857, two fatal cases occurred at West Boldon, in Durham. Two laborers ate some of the root of the oenanthe. They were found soon afterwards lying insensible and speechless, their faces livid, tongues swollen and protruded, and there were convulsive movements of the teeth, frothy mucus with blood about their mouths, eyes full and projecting, pupils dilated, breathing stertorous and labored, with occasional general convulsions. They both died in an hour and a half from the time at which they were first discovered. On inspection, it was found that there had been bleeding from the ears; the abdomen was livid and swollen. The stomach contained a gruelly liquid, with some of the partly digested roots; on removing this liquid, the membrane was found congested and softened. The lungs were engorged with dark liquid blood, and the blood contained in the heart was in a similar state. Mr. Boyle, to whom these cases occurred, forwarded to me a portion of the roots, and there was no doubt that they were the roots of the oenanthe crocata."

(Alfred Swaine Taylor, On Poisons in relation to Medical Jurisprudence and Medicine, 2nd edition, Philadelphia 1859, p. 715)

1858 - The crew of a ship had eaten of the roots which they had found ashore - Robert Grahame

"On the morning of Saturday, the 13th of February, the barge of H.M.S. Wellington was ordered ashore at Cambelltown at 8 a.m. for the purpose of being scrubbed and the gear cleaned by the boat's crew. Close to the spot selected for their operation ran a small stream or burn, as they term it hereabouts, and along its banks grew in abundance the plant in question. The men had strayed along the stream and some of them had pulled up the plant, washed the roots or tubers and eaten them, their example being quickly followed by the rest, as is usual in such cases. They afterwards collected a further quantity, washed it, and brought it on board for their messmates, to the amount of perhaps as much as would have filled a ship's wash-deck bucket. For some time after the arrival of the men with the boat (about 10 a.m.), nothing occurred to induce any suspicion of the danger their imprudence had subjected them to, and unhappily four of the ship's company had partaken of the root in the meantime, among whom was William Walsh, ship's corporal, who ate four good-sized tubers.

About 10.20 a.m. I was summoned to the aid of Owen Gaffney, who was labouring under severe epileptic accession on the lower deck, having just recovered from an attack of the same nature, Mr. Ironson, my assistant, having allayed its intensity by the cold affusion. On my arrival the man was in a state of almost immovable rigidity, insensible, moaning and

breathing stertorously; countenance livid; eyes fixed, pupils dilated; sanguineous foam issuing from the mouth; intense action of the dorsal and lumbar muscles, or opisthotonus; the pulse very feeble, and the heart's action even scarcely perceptible; lower jaws firmly locked, the tongue much injured and slightly protruding. The cold douche to the head was freely administered. My instant impression was that he was labouring under the effects of some deleterious matter taken while on shore; and having given utterance to my suspicion, one of the men said, "Yes, Sir, he has been eating a good deal of this root," producing a mess basin half full of the plant and the root. Having no doubt whatever of the nature of the case, I had him at once moved into the sick bay, and with some difficulty forced him to swallow a little brandy. This appeared to relieve him somewhat, or the violence of the spasms relaxed spontaneously, and I at once gave him an emetic of the sulphate of zinc, there was, however, not the slightest return of consciousness; he lay gasping and foaming at the mouth; the pulse, which had improved a little, becoming again imperceptible, I gave him a liberal dose of the sesquicarbonate of ammonia, but to no purpose, for in eight or ten minutes from my first seeing him he expired gently and without a struggle.

By this time alarm had seized on the majority of those who had eaten, both ashore and on board, and more than sufficiently alive to the necessities of their ease, they came rushing tumultuously into the sick bay for assistance, complaining of feeling uneasy, although, in some cases, without prominent symptoms. To all I administered the zinc emetic instantly, followed by copious draughts of tepid water, and, subsequently, brandy and ammonia, as seemed requisite; in most the stomach did not respond readily to the emetic, and in others not at all, although they used every effort to induce vomiting, by means of draughts of tepid water, tickling the fauces with feathers, and pushing the fingers into the pharynx. In five of the cases, including the man who died, the spasmodic accessions were severe and successive; in one the more prominent symptom was extreme restlessness, approaching to mania; in almost all there was semi-delirium and jactitation, if not convulsion; and in one or two prostration, requiring repeated small doses of brandy and ammonia. In two of the cases the men had said nothing, expecting I suppose to brave it out, when they suddenly fell down in convulsive fits on the fore-castle, and were carried into the sick bay.

William Walsh, ship's corporal, who had been assisting in bringing men into the sick bay, and had actually reported Gaffney's death on deck, came back again to the bay to offer his assistance. He then smilingly, and seemingly without any fear of the consequences, told me that he had also eaten some of the root, but did not feel in the least unwell. I was preparing for him an emetic draught, when he said that he was beginning to feel giddy. I immediately gave him the draught, which proved most effective. He vomited copiously, and for some time kept up the action by feathers and warm water. His countenance improved, and in other respects he seemed to be much relieved; but, when about to be removed to his hammock, convulsions came on, and for two hours one fit followed another, until they terminated in his decease. He latterly required ammonia, brandy, sinapismus to the lower extremities, and assiduous friction.

In all the cases in which there were convulsions, opisthotonus was the form assumed. As we were hourly expecting to proceed to sea, the Procurator Fiscal came on board at once, and held a precognition, and Mr. Ironson opened the body of Gaffney. The surface was slightly livid; the stomach empty - tough, viscid, tenacious mucus adhering to its mucous lining, which was highly congested. In the ileum small portions of the root were found. On opening the abdomen, and previous to examining the stomach, an overpowering and pungent odour of the plant at once became diffused, resembling that of celery seed; and in all the cases the patient complained of constant and continued eructations strongly flavoured by the plant, tendency to cramps in lower extremities; pain along the course of crural and sciatic nerves, commencing in the spinal column, more especially the lumbar region; vertigo, griping, or

severe tormina; debility, and total loss of appetite for food."

[To the Editor of the Medical Times and Gazette.]

"Sir, - In your last week's number are related by Dr Grahame two fatal cases occurring after eating the roots of *Oenanthe crocata*.

My reason for addressing you is on account of the author of the paper confounding this plant, *Oenanthe crocata*, Anglicè, Hemlock water dropwort, with wild celery, or *Apium graveolens*.

It may be a question which of the plants was really gathered and eaten in the case treated by Dr. Grahame. The probability is that, as stated by him, it was *Oenanthe crocata*, which is not, however, wild celery. Sir James Smith (*English Flora*, vol. ii. p. 76) says of *Apium graveolens*, or wild celery, "The seeds and whole plant in its native ditches are acrid and dangerous, with a peculiar strong taste and smell. By culture it becomes the mild and grateful garden celery."

Oenanthe crocata, or Hemlock water dropwort, is, like *Cicuta virosa*, a plant growing in similar wet situations, but of much rarer occurrence; undoubtedly a very poisonous plant, as Dr. Grahame's cases but too well prove.

In Dr. Hornton's *Family Herbal*, p. 313, are related several fatal cases from the use of *Oenanthe crocata*, which in some had been mistaken for wild celery, and in others for water-parsnip (*Sium nodiflorum*).

As the subject is of considerably practical importance I thought these few remarks might not be unacceptable, either to you or to Dr. Grahame.

I am, etc.

John Windsor, F.L.S., etc."

(Two Men poisoned by the Herb *Oenanthe crocata* or Wild Celery, by Robert Grahame, M.D., *The Medical Times and Gazette* vol. 37, London 1858, p. 241; Letter to the Editor *ibid.* p. 280)

1865 - Five boys at Cork ate the roots with avidity mistaking it for field carrots - John Popham

"On April 15th, 1865, five boys were brought to the Cork North Infirmary, at three o'clock, p.m., with symptoms of poisoning by the *Oenanthe crocata*. They saw the plant growing on the banks of a stream, and mistaking it for field carrots, they all began to eat it with avidity.

The effect of the poison was soon apparent. They felt a burning in the stomach and constriction of the throat, with nausea and headache, and one of the party fell down on the bank in strong convulsions. Terrified by this, the others left him, in order to get assistance; but when help arrived, he was found lying on his face, in the stream, quite dead.

On being brought to the infirmary, between one and two hours after the occurrence, four out of the five were relieved from the severe symptoms of the poison by emetics and other remedies, but its sequelae, such as colic pains in the abdomen, loss of animal heat, giddiness, and depression of spirits, remained till the following day.

The fifth boy, named Mulcahy, was long in a very precarious state, passing in the interval before his admission through alternations of tetanic convulsions and insensibility, with loss of speech. An emetic of sulphate of zinc was given him, and succeeded in bringing up a piece of the root; the effect was kept up by draughts of mustard and water, which produced a salutary irritation of the tongue and pharynx, rousing him from the lethargic state, as he struggled violently against their administration.

His symptoms were very critical; face flushed up during his struggles; livid, when quiet; pupils dilated, and insensible; breathing slow and laboured, interrupted by constant sighing

and convulsive cough ; pulse eighty-four, feeble, and irregular; both the heart's sounds distinctly audible. In order to test the loss of speech, as all our efforts were unsuccessful, I got his mother to speak to him, but for some time without effect, till at last a dim hazy perception of her familiar voice began to dawn upon his mind, and with a spasmodic exertion he jerked out the word "Mamma." After a course of similar entreaties and shakings up, she got him to put out his tongue, but in a very hesitating and tremulous fashion. Considerable hyperesthesia existed in the soles of the feet, the slightest tickling sufficed to rouse him from stupor; and accordingly when his somnolence waxed very profound, we availed ourselves of it, as a therapeutic agent, and he would invariably withdraw his feet with a growl of impatience. When placed in the sitting posture his head used to fall forwards, or backwards, or to the shoulder, as if the co-ordinating power of the muscles was suspended, or the polar force exhausted by the previous discharge on them of the spinal dynamic matter; but when replaced on the pillow, he tossed his head from side to side, accompanied by jactitation of the hands.

As the emetics ceased to act the stomach pump was used by Dr. O'Sullivan, house surgeon, and warm water was thrown in, with the effect of bringing off some imperfectly masticated flakes of the root. Strong coffee was given him, which he took willingly, stopping after each mouthful for a second or two. Other remedies, such as sinapisms to the spine and abdomen, cold effusion to head, friction and warmth to feet, and stimulants were used.

Roseola was noticed on the abdomen in patches, such as Devergie describes as being occasionally observed in like cases.

Seven o'clock, p.m. - He is in deep sleep, snoring loudly, and moaning, the eyelids spasmodically closed. When slapped on the cheek by the house surgeon, he bounds up indignantly, stammering out in pitiful remonstrance " wisha don't then," and covers up his head impatiently; he is immediately buried in unconsciousness again. No urine passed.

April 16. - More conscious, but still much confused in intellect, and vacant in expression; speech returning, but he takes time to answer a question; pupils less dilated; tongue sore and swollen; pulse 84, rising to 108 on sitting up.

April 17. - Consciousness has quite returned, but all is a blank since he eat the root up to this morning; temper irritable; tongue raw at tip and edges; he says that the quantity of the root which he swallowed was about the top joint of the little finger; the piece thrown up by the zinc emetic was about half that size. He left hospital next day quite recovered.

Remarks. - I was able to identify the plant by comparing the leaves and root with the excellent figure in *Sowerby's Botany* (No. 3713). The symptoms just described show the double property which this poison possesses as an acro-narcotic, first of causing local irritation of the mucous membrane in the primæ viæ, and the follicles of the stomach; and secondly, of violently disturbing the equilibrium of the muscular tissues, producing at intervals a powerful discharge on them of polar force, to be succeeded by great exhaustion; along with this irritation of the spinal cord there occurs cerebral congestion, torpor of the organs of sense, and stupefaction of the intellectual faculties. It seems to terminate life by one of two ways; one, by asphyxia, from its tetanic action upon the muscles of respiration, and, perhaps, the heart; the other, and more general way by coma, resembling the mode of death caused by opium in some respects, but differing in the dilated state of the pupil. Its effect upon the fibrin of the blood in destroying its coagulating power is common to it with other poisons.

Aphasia - A symptom occurred in this case, namely, loss of speech, which has lately excited much attention. For some time after the occurrence his utterance was totally abolished, and but slowly returned. The tongue was certainly injured by the teeth during the spasms, but this would produce indistinctness, and not extinction of speech; besides he had the power of uttering sounds or outcries when stirred up actively. There is little doubt that this poison has

the property of paralyzing the muscles of the tongue, producing that form of impeded movements of this organ as connected with vocal sounds, which Romberg calls *glossaplegia articulata*."

(Cases of Poisoning from Eating the Roots of the *Oenanthe Crocata*. By John Popham, M.A., M.B., Physician to the Cork North Infirmary. The Dublin Quarterly Journal of Medical Science vol. 40 (1865), p. 484-486)

1873 - Les effets de la racine sur la peau et les muqueuses - M. Gayet et P. Bloc

"Je râpai moi-même la racine sur un tamis et sous un filet d'eau pour recueillir ma fécule, sans prendre de précautions pour me garantir mes mains. Une heure après, j'avais les mains enflées et me causant une douleur comparable à l'effet d'une brûlure. Je fus ainsi pendant deux jours, et dans certains endroits la peau se souleva comme de véritables pustules.

Quand on coupe des racines fraîches d'*Oenanthe crocata*, on voit bientôt apparaître à leur surface une huile demi-concrète; cette huile est un mélange de résine ou de gomme résine et d'huile volatile. C'est cette huile qui me paraît être le principe toxique de cette plante. Elle jouit de propriétés très-irritantes: mise sur la peau, elle ne tarde pas à y déterminer une assez vive inflammation." - Gayet⁽¹⁾. (...)

"Le 26 juin 1870, nous râpons 225 gram. de racine fraîche d'*Oenanthe safranée*, et malgré les précautions nous éprouvons, deux heures après l'opération, une légère sensation de cuisson que l'on peut mieux comparer qu'à la sensation ressentie par suite de l'urtication. Cette cuisson existe à la face dorsale des doigts et de la main; rien à la face palmaire. Voulant nous rendre compte de la nature et de la durée de ce symptôme, nous évitons de nous laver: au bout d'une heure environ, tout avait disparu, et nous n'avons vu apparaître ni éruption ni desquamation; la peau était uniformément rouge, et cette coloration s'est effacée peu à peu, sans laisser rien de particulier.

Nous expliquerons le peu d'intensité des symptômes par la nature même de la substance employée: il est bien évident que les racines empruntent au sol qui les renferme des propriétés spéciales: et, de même que les morsures de certains serpents mortelles sous les tropiques, sont à peu insignifiantes chez nous, de même l'*Oenanthe* qui vient en Bretagne et dans le terrain qui lui est propre jouit de propriétés plus énergiques que celle que nous avons employée, plante unique de son genre dans le pays et qui n'y a vécu grâce aux soins de la culture." (...)

"Lorsqu'on malaxe pendant un certain temps de la racine, ou que l'on met la peau ou la muqueuse en contact avec le suc frais et surtout le suc jaune gomme-résineux, on observe les phénomènes suivants: prurit plus ou moins accentué se faisant sentir aux parties touchées, suivi bientôt d'une éruption miliaire confluyente, analogue à celle que produit la piqûre par l'*Urtica urens*. Cette éruption peut se borner aux parties touchées, mais plus souvent elle envahit le membre; parfois tout le corps de l'individu est le terrain sur lequel l'éruption s'effectue. Alors les accidents, de locaux qu'ils étaient au début, deviennent généraux; il y a réaction fébrile, chaleur, engorgement des parties malades et terminaison, soit par la résolution (et alors il se produit une desquamation), soit par la suppuration.

Appliquée sur les muqueuses, les accidents sont plus graves; en voici un exemple que nous avons traduit de l'*Edinburg medical Journal*. 'Une femme appliqua pour une ophthalmie scrofuleuse avec opacité de la cornée, un cataplasme de l'*Oenanthe crocata* qui irrita et inflamma l'œil d'une manière affreuse, et causa aussi l'enflure et l'inflammation de l'œil sain. Il fallut recourir aux sangsues appliquées aux apophyses mastoïdes pour arrêter ces graves accidents.'

Cette action irritante de l'*Oenanthe* est connue des paysans de la Bretagne et du bas peuple anglais, qui, ainsi que je le disais en parlant des divers modes d'emploi médicaux de l'*Oenanthe*, s'en servent pour provoquer des éruptions, traiter la lèpre, la gale, les

hémorroïdes, etc."

(1) Gayet, Essai sur l'*Oenanthe crocata*, Montpellier, 1870, cité par H. Bloc, p. 68

(P. Bloc, Étude toxicologique et médicale sur l'*Oenanthe safranée* (*Oenanthe crocata*), Paris 1873, p. 71, 89)

1873 - L'action toxique de L'*Oenanthe safranée* sur les animaux - P. Bloc

"L'*Oenanthe* exerce aussi une action toxique sur les animaux, et l'on a presque journellement dans certaines prairies de la Bretagne à enregistrer la mort des bestiaux par suite de l'ingestion de cette racine, car ils peuvent, paraît-il, manger impunément les feuilles et les tiges. Roques a signalé cette ombellifère comme un poison violent pour les bœufs et les chevaux.

Dans la commune de Gouesnon, près de Brest, dans des propriétés aux environs de Quimper, les cultivateurs ont eu à déplorer des pertes malheureusement trop fréquentes.

On a remarqué que c'est après avoir nettoyé et curé les ruisseaux des prairies que ces accidents arrivent ; ce fait s'explique aisément : les racines sont mises à nu, les animaux les mangent et ne tardent pas à éprouver de graves accidents ; les deux observations suivantes en sont une preuve manifeste. La première est empruntée à la *Phytographie médicale* de Joseph Roques, Paris, 1821, p. 79.

Au mois d'octobre 1821, M. de Kœreguin, propriétaire dans les environs de Quimper, fit curer les fossés de ses prairies ; ce qui en fut retiré étant destiné à servir d'engrais, on le laissa le long des fossés. Il s'y trouvait une grande quantité d'*Oenanthe crocata* à fleurs blanches, à racines très-multipliées, pivotantes, rondes et de la grosseur d'une carotte. Quoique dures et coriaces, ces racines contiennent une substance laiteuse, et les animaux qui en mangent ne peuvent ni les rejeter ni les digérer; ils tombent bientôt en gémissant, écument horriblement, enflent et périssent en moins d'un quart d'heure. Ce qu'il y a de singulier, c'est que la *fane* (feuilles) est une nourriture succulente et saine pour les bestiaux, tandis que la racine est pour eux un poison mortel. M. de Kœreguin, s'étant aperçu que ses domestiques jetaient les racines d'*Oenanthe crocata* pardessus les fossés, sur une colline où pâit journellement le bétail de sa ferme, donna l'ordre de les ramasser soigneusement, de les mettre dans un sac et de les rapporter à la maison. Cet ordre ne fut point exécuté; quatre jours après, vers 10 heures du matin, la fermière, effrayée, accourut l'avertir que trois bœufs de travail périssaient. S'étant rendu sur les lieux, il les vit périr tous les trois en moins de vingt-cinq minutes. On les ouvrit, et on trouva leur panse remplie de morceaux de racine d'*Oenanthe*. Ils rendaient par la bouche et par les naseaux une grande quantité de matière liquide, rougeâtre et très-fétide, semblable à celle qui découle de ces racines lorsqu'on les rompt. La chair des animaux ainsi empoisonnés se putréfia très-rapidement.

Quelque temps après cet accident, le même propriétaire perdit deux vaches laitières qui mangèrent des racines d'*Oenanthe* qu'on avait laissées le long des fossés. Elles périrent en un instant. Un cultivateur de ses voisins, qui avait curé les fossés d'un pré et négligé d'enlever les racines de la même plante, ignorant qu'elles fussent un poison violent pour les bêtes à cornes, perdit également trois bœufs de travail. Ces animaux, ouverts, présentèrent les mêmes phénomènes que ceux décrits ci-dessus.

Le *Publicateur de la Vendée* rapporte le fait suivant : Mercredi dernier, M. Guérin, cultivateur, commune de Cintré, fit curer les ruisseaux de sa prairie, et étendre sur celle-ci le terreau avec les herbes et les racines qui s'y trouvaient.

Le lendemain on y conduisit le troupeau de vaches, composé de vingt têtes. Quelques heures après, ces animaux manifestèrent les symptômes les plus alarmants, et cinq d'entre eux tombèrent *comme foudroyés*.

M. Templé, vétérinaire, fut immédiatement appelé et constata que ces animaux s'étaient

empoisonnés en mangeant la racine d'une plante ombellifère appelée *Oenanthe crocata*, ciguë aquatique par quelques-uns, et Belle ou Bène par les paysans.

Les bestiaux mangent impunément, ajoute le vétérinaire, la tige et les feuilles de cette plante. La racine, qui ressemble assez à celle du dahlia, dont le suc est jaunâtre et d'une odeur désagréable, est pour eux un poison très-violent. Cette plante foisonne dans les ruisseaux des prairies basses et humides ; nos cultivateurs devraient la connaître, éviter de la mettre à la portée de leurs bestiaux, ou plutôt devraient chercher à la détruire. "Toute la Bretagne, et surtout les environs de Brest, en sont infestés; il serait prudent et de première utilité pour les propriétaires et les agriculteurs d'arracher jusqu'aux dernières racines de cette plante, qui occupe dans les prairies la place de végétaux plus utiles et surtout moins toxiques ; d'en faire, dans un endroit de leur propriété, un seul tas et d'enfouir sous une couche de pierres ces tubercules et ces tiges qui concourent tous les jours à étouffer et à faire disparaître les plantes fourragères qui les environnent." (Gayet, Essai sur l'*Oenanthe crocata*, Montpellier, 1870)

Des mesures ont même été prises pour préserver ou tout au moins avertir les cultivateurs des propriétés dangereuses de l'*Oenanthe*. En 1857 ⁽¹⁾, le préfet de la Loire-Inférieure fit connaître que des expériences avaient permis de constater que 5 à 600 gram. d'*Oenanthe* empoisonnaient un bœuf ou un cheval de force ordinaire. Des observations recueillies avec soin ont démontré que si les symptômes qui constituent l'empoisonnement des animaux sont communs, la dose qui produit l'intoxication peut varier. Aussi 200 à 300 grammes de tubercules d'*Oenanthe crocata* ont suffi pour amener la mort d'un cheval. L'absorption est très-prompte, et après plusieurs périodes successives de convulsions et de vertiges, l'animal se roule à terre et succombe en deux ou trois heures.

(1) *Archives de médecine navale*, p. 88. 164.

(P. Bloc, Étude toxicologique et médicale sur l'*Oenanthe safranée* (*Oenanthe crocata*), Paris 1873 p. 56-58)

1873 - Poisoning of a herd of oxen in the county of Limerick - Charles A. Cameron

"Dr. Charles A. Cameron, Professor of Hygiene, Royal College of Surgeons, Ireland, and Analyst of the City of Dublin, sends us the following case of cattle-poisoning.

A herd of seventy-four oxen were at the end of last April turned into the demesne of Lord Dunraven, Adare, County of Limerick. In a few days the animals began to sicken, and in about a week forty-three died. Mr. Keyes, V.S., who saw some of them, stated that in most of the cases death took place very soon after the illness was observed. The animals foamed at the mouth, had distended nostrils, shivered at the loins and hind extremities, the respiration was rapid and laborious, and they had tetanic spasms, the neck being curved laterally. Some of the animals reeled in a circle for several minutes, and then fell and died instantaneously. As it was suspected that the animals had been poisoned, the stomachs of one of them were sent to Dr. Cameron for examination. He could not detect any of the ordinary poisons, but in the herbage found in the first stomach he observed numerous fragments of a plant which he suspected was the water dropwort (*Oenanthe crocata*). Dr. Cameron sent for some of the herbage of the demesne and this was found to include a large proportion of the water dropwort, one of the most virulent British poisonous plants.

There are on record a few cases of poisoning of man and some of the lower animals by water dropwort. The symptoms noticed by Mr. Keyes are similar to those observed by M. Bellamy, and described by him in the *Recueil de Médecine Vétérinaire* for 1856."

(Poisoning of forty-three oxen by *Oenanthe crocata*, *The Lancet* 1873, vol. 1, p. 819-820)

1876 - Nine children ate of a root which a fisherman had found - R. W. Foss

"On Saturday, March 18th, 1876, a fisherman noticed on the banks of the river Tees what he

considered an extraordinary plant, resembling, according to him, both celery and parsnips. He took this home with him, and by some mischance it fell into the hands of children who were playing about.

Altogether about nine ate of it. The first attacked with symptoms of poisoning was a boy aged three years. About a quarter of an hour after having partaken of the root, and whilst eating a cake, he fell down in a fit of convulsions, and was quite unconscious; he remained this way till ten o'clock that night, when he died. Immediately afterwards a little boy, aged five years, and a girl about the same age (both of whom had had some of the root) were attacked in the same way. The boy died about seven o'clock that evening, the girl recovered. In another house a girl aged six years was attacked together with a boy about the same age. The girl died on Sunday afternoon about four o'clock, the boy recovered. There were others affected but in a lesser degree.

The signs of the poisoning were the same in all the cases. About fifteen minutes after eating the root they became unconscious and were violently convulsed, at the same time the jaws were closely locked, the mouth covered with foam, in some cases mixed with a little blood. The convulsive fits recurred one after the other with extreme rapidity, there being scarcely an interval of half a minute between each. In the case of the girl, who lived nearly a day, there was considerable opisthotonos or arching of the back on the Sunday, which had taken the place of the violent general convulsions of the previous evening. About three hours before she died the convulsions ceased altogether. She, however, remained in a state of coma till her death. The other two died in the convulsions. They were all absolutely unconscious. They never spoke or uttered any cry indicating that they were in pain.

The pupils of the eye in all the cases were widely dilated. The eyes themselves were fixed, and were never moved, the retinas being apparently insensible to light, as the children never manifested any sign of recognizing those who were attending to them. In the case of the child aged three, upon whom the post-mortem examination was subsequently made, it was noticed that about an hour before death the pupils of its eyes had relaxed, and were about the natural size; however, after death they were found dilated. There were no signs of paralysis observed during life. All reflex excitability was gone; irritation of the fauces by putting in the stomach pump did not in the least excite any tendency to vomit. In the intervals of the convulsions the girl, aged six years, during the earlier part of her illness, protruded her tongue as far as she could, as if there were something at the base she wish to get rid of. Occasionally there was a sudden cessation of breathing, followed by a catching sigh, indicating probable spasm of the diaphragm. It was impossible to get them to swallow anything, there was no tendency to vomiting or purging. The pulse at first was about 100 in the minute, but it soon became hardly perceptible, and in all the cases was imperceptible for hours previous to death. There was a ghastly pallor of the cutaneous surface of the face, with blackening round the eyelids. The skin was cold, especially the hands and feet, which were blue long before death.

The treatment was of little avail in those who were already convulsed. Emetics were the means probably of saving the lives of some of them.

A *post-mortem* examination was made about forty hours after death on the body of the girl aged three years, with the following, result:

Externally there were signs of commencing decomposition, the skin of the abdomen being of a greenish-yellow colour, the pupils of the eyes were dilated, the jaws were firmly clenched, rigor mortis was established in the legs, but the arms were flaccid. Internally the left side of the heart was filled with clotted blood, the right side was empty. The right lung was adherent to the ribs from previous pleurisy. Both lungs were congested, black on section with oozing of dark blood and some frothy mucus.

The lining membrane of the stomach was paler than usual. The stomach itself contained about a fluid ounce of pale mucus. Nothing further was observed here.

The liver, spleen, and kidneys were normal. On examining the head, the blood-vessels of the membranes of the brain were very much congested with black blood. The substance of the cerebrum and cerebellum was also much congested.

There now only remain to be considered the amount of the poison taken, the time it took to produce the fatal effects, and the root itself. I will take the last point first. The root consisted of several tap-shaped radicles. There were said to have been four or five of these at first. Two were produced at the inquest. These radicles were three or four inches in length, about an inch and a half in circumference, white in colour, like a parsnip, and finely fluted longitudinally. The taste at first was sweet to the tongue and palate, but was soon followed by a sharp pungent sensation. It has a disagreeable sweet nauseous odour. The *Gentleman's Magazine*, in the year 1747, p. 321, in commenting on a case similar to this says : - "What they ate was *Oenanthe aquatica cicutae facie* of Lobelius, which grows in plenty all over this country, and is called by the inhabitants five-fingered root, and is much used by them for cataplasms for the felon or worst kind of whitlow. They ate only the root and none of the leaves or stalk. So it was in the case perhaps, because there were none of the leaves or stalk."

It is impossible to tell the quantity of the root taken by each child. It cannot have been much. In the worst case I could venture to assert that he did not take more than half of one of the roots. One child died about an hour and a half after taking the poison, the next lived about four hours and a half, and the third lived twenty-three hours.

"This seems," says Christison, "to be the most energetic of the umbelliferous vegetables. In none of the fatal cases was life prolonged beyond three hours and a half; and in several death took place within an hour. One man was killed by a single spoonful of the juice of the root."

In all other recorded cases of poisoning by this plant those who have been poisoned by it have partaken largely of it under the impression, in some cases that it was celery, in others that it was parsnips. There were three deaths of the respective ages of three, five, and six years. There were at least six recoveries, some of which I did not see. One which I did see had widely dilated pupils with convulsions, but after vomiting in the course of two hours it recovered."

(R.W. Foss, M.D., Some cases of poisoning by *Oenanthe crocata*, *The Practitioner*, vol. 17, 1876, p. 248-251)

1891 - A girl aged nine have eaten portions of the plant - F. N. Williams

"Sirs, - As cases of poisoning from eating parts of this umbelliferous plant are very uncommon, I thought it might be well to record an instance.

A girl aged nine was found dead in bed on the morning of May 9th. She was loitering on her way back from school on the previous afternoon, and appeared to have eaten portions of the plant, including a leaf. She went to bed almost as soon as she got home without complaining of feeling ill. She half woke up in the middle of the night and muttered to her bedfellow something about feeling sick, dropped off to sleep, and never woke again. I examined the fibrous pulp and chewed leaf I found in the stomach and duodenum, and identified the plant as *Oenanthe crocata*. The mucous membrane of the stomach was heaped up into congested ridges, and the other post-mortem appearances corresponded exactly with those described in recent text-books on toxicology. Death apparently took place in twelve hours.

(F. N. Williams, District Medical Officer for Brentford, Letter to the Editor, Poisoning by *Oenanthe crocata*, *The Lancet* 1891, vol. 1, p. 1189)

1900 - Two inhabitants of a lunatic asylum ate of the root - Edward D. Griffin

"J. M., without any previous warning, fell down in a fit in the dining hall as he was finishing dinner. He was seen by the superintendent, who considered that it was epileptic. He regained consciousness soon afterwards. Whilst being removed from the dining-hall to the ward he had a second severe fit, with vomiting. On arriving in the ward his face was livid, his pupils dilated and fixed; the conjunctivae did not respond to the touch; there was a bloody foam about the mouth and nostrils; the breathing was stertorous, and there was complete insensibility. He had six severe fits subsequently with an interval of a few seconds between them. The convulsion, which was clonic, was general, but attained its greatest intensity in the lower extremities first; next in the upper extremities, and lastly in the facial muscles. He died before a hypodermic of apomorphine had time to act. It was impossible to use the stomach pump and give emetics by the mouth, owing to the severe and continuous convulsion. Death was due to asphyxia, and the heart continued to beat for a few seconds after respiratory movements had seized.

At the same time T. F. was seized with a severe fit when going out to resume work on the farm after dinner, and vomited a quantity of food whilst being carried into the ward. He was seen at once, and half an ounce of ipecacuanha wine given, which induced vomiting in a few minutes; the effects of the emetic were kept up by giving the patient tepid water to drink. There was no insensibility in this case, but there was a marked change in the mental state after the convulsions. The patient was delirious and talked incessantly to himself; was drowsy and did not like being questioned. His face was pale, the pupils dilated, and the pulse weak and slower than normal. Two hours afterwards he imparted the following information:

Between 12.30 and 1 P.M., while at work in a field, he got what he described as a piece of carrot from the patient J. M. He took two bites of this and then threw it into a stream of water at the lower end of the garden. The writer, in company with the head attendant, searched this place and found what looked at first sight like a piece of parsnip in the water. It had a strong disagreeable smell and acrid taste. The broken surface was dotted over with reddish brown spots each the size of a pin's head. There were not present when another part of the root was broken across, and only appeared after exposure to the air for a few minutes.

The root of the plant which was dug up consisted of as many as 20 oblong tubercles varying in length from four to eight inches. This plant grows in great abundance in marshy places and by the banks of sluggish streams in the south of Ireland, and country people use it for poulticing boils, carbuncles, and other inflammatory swellings. On the following day T. F. complained of pain and a sense of heat in throat, chest, and hypogastrium, and some difficulty in swallowing. On examination the faeces and pharynx were seen to be congested. Castor oil was given the evening before, and he was given strong tea after the vomiting had ceased. This was the only medical treatment used in the case."

(Edward D. Griffin, M.D., Killarney District Lunatic Asylum, Poisoning by Water Parsnip (*Oenanthe crocata*), *The British Medical Journal* March 2, 1900, p. 509)

1937 - Poisoning of two children who had eaten the leaves and root - W. E. Thomas

"SIR, - On Easter Monday, while visiting in the country, I knocked at a cottage door to inquire my way, and was confronted with a rather anxious mother holding a small girl who was having a convulsion.

I put the child on a sofa, and she had five convulsions in rapid succession, becoming blue in the face, frothy at the mouth, and with shallow respiration. Her elder sister was sent to fetch my bag from the car; and she came back and said, "Mother, Vivian is on his back in the garden having fits." Now I had two children who were vomiting and having convulsions, the

cause of which was obscure, and by this time I too was becoming anxious, as the boy, aged 5½, was unconscious, grey in the face, and with his pulse imperceptible at the wrist. In view of his grave condition I injected 1 c.cm. of coramine, and later he showed signs of reviving. Both children seemed to have got over the serious effects next day, but their muscles were still twitching.

I discovered that both children had eaten the leaves and root of a plant they found in the river bed, the *Oenanthe crocata* or water dropwort, an exceedingly common plant in this district. Cushny's *Pharmacology and Therapeutics* gives a good description of the human poisoning, which the symptoms of the children closely followed. The poisonous principle is oenanthotoxin, which produces symptoms similar to those caused by picrotoxin. In view of the coincidence and unusual nature of the cases I think them worth recording. - I am, etc.,
Cowbridge, May 6. W. E. Thomas. "

(W. E. Thomas, Water Dropwort Poisoning, The British Medical Journal May 15, 1937, p. 1045)

1987 - Accidental poisoning of four adults from eating a soup made from a wild plant - P. Fitzgerald et al.

"Four Dutch adults (two men and two women, age range 28-40) presented with vomiting and sweating. Two had suffered generalised convulsions before admission. Symptoms appeared within two hours after they had eaten soup made from a wild plant that they believed to be celery. On admission none of the four had abnormal neurological signs apart from dilated pupils. All survived, requiring only supportive treatment. Positive botanical identification of the root confirmed that it was Hemlock Water Dropwort (*Oenanthe crocata*), the most toxic of the native species. Accidental hemlock poisoning, though rare, still occurs. Fourteen cases have been recorded in Britain this century, nine of which were fatal. The patients described here almost certainly survived because they boiled the hemlock tubers and shoots, particularly inactivating oenanthe toxin, the active principle."

(P. Fitzgerald, N. Moss, S. O'Mahony, M. J. Whelton, Regional Hospital, Cork, Eire, Accidental Hemlock poisoning, The British Medical Journal vol. 295, 19-26 December 1987, p. 1657)

1987 - A young couple ate a meal of duck's eggs, nettles, and the boiled leaves and roots of a plant picked on the Thames riverbank - M. J. Ball et al

Summary: Severe plant poisoning is relatively uncommon in adults. We report two adults who ingested hemlock water dropwort roots, having mistaken them for wild parsnip. One developed prolonged convulsions, severe metabolic acidosis and respiratory distress requiring mechanical ventilation. The toxin - oenanthotoxin - was detected in the gastric aspirate and measured by high performance liquid chromatography.

Introduction

Hemlock water dropwort (*Oenanthe crocata*) is probably the most poisonous plant found in Britain. It belongs to the family Umbelliferae, which has other poisonous members - water hemlock (genus *Cicuta*) and hemlock (genus *Conium*). A 4 to 6 foot perennial which grows in wet river banks, its stem resembles celery and the roots, which are the most poisonous part, resemble small parsnips. Livestock poisoning occurs sporadically but only 14 human poisonings were reported between 1900 and 1978, mostly in children⁽¹⁾. The mortality rate is, however, about 70%.

Case reports

A 26 year old man ingested a meal of ducks' eggs, nettles, and the boiled leaves and bulbar roots of a plant picked on the Thames riverbank. Forty minutes later, he developed nausea,

abdominal pain, tachypnoea, ataxia and had a generalized convulsion. On admission to hospital, he was experiencing major tonic/clonic seizures and was cyanosed with widely dilated pupils. His pulse rate was 145/min, and blood pressure 150/90 mm Hg. 100% oxygen was given. Arterial blood gas analysis revealed a pH of 6.68, Pa, O₂ of 30 kPa, Pa, CO₂ of 5.43 kPa, and a base excess of -36 mmol/l. Sodium bicarbonate, phenytoin and diazepam were administered intravenously, but the convulsions continued and a bradycardia developed. An intravenous infusion of thiopentone was commenced and the patient was paralysed, intubated and ventilated. Gastric lavage produced a large quantity of plant material. A fresh specimen of plant was identified by botanists as hemlock water dropwort.

The patient received 300 mmol of bicarbonate to assist correction of the acidosis, and thiopentone at 2-6 mg/kg/h for 24 hours to depress cerebral electrical activity. Twelve hours after admission his arterial pH was 7.4, the venous plasma bicarbonate concentration was 23 mmol/l, and the plasma urea was normal. Subsequent analysis of plasma lactate revealed a concentration of 10 mmol/l on admission which fell to 5 mmol/l within 10 hours. After 30 hours in hospital, no further generalized convulsions occurred on phenytoin alone, although the electroencephalogram still showed bilateral slow wave abnormalities. The patient was extubated after 60 hours, and there were no clinically obvious neurological sequelae.

Serial biochemical results revealed markedly raised activities of aspartate transaminase, with a peak value 258 IU/l (reference range 5-35 IU/l), creatine kinase, which reached 5995 IU/l (reference range 30-180 IU/l), and lactate dehydrogenase. These enzyme activities remained elevated for 10 days. Gamma glutamyl transpeptidase activity was also elevated and the plasma bilirubin concentration was slightly raised on day 3, but the alkaline phosphatase activity remained within the reference range.

Case 2

The 20 year old female companion of Case 1 ingested less of the plant and then induced herself to vomit. Gastric lavage was also performed on admission to hospital one hour later. This patient experienced several hours of nausea, mild confusion and paraesthesia. The plasma bicarbonate was 18 mmol/l, the creatine kinase activity was raised at 200 IU/l and the aspartate transaminase activity was greater than 110 IU/l for 3 days, but no other biochemical abnormalities were noted.

Discussion

The main toxic constituent of hemlock water dropwort is oenanthotoxin - an unsaturated higher alcohol (C₁₇ H₂₂ O₂) which was purified by Clarke ⁽²⁾. It resembles cicutoxin which is the toxic principle in water hemlock. Oenanthotoxin concentration in the plant roots is highest in winter and spring, and ingestion of very small amounts may prove fatal.

The pharmacological effects of oenanthotoxin have been studied in animals and include an initial increase in respiratory rate and hypotension followed by hypertension ^(2,3). Severe convulsions are common in animals and man and may be due to antagonism of an inhibitory transmitter in the brain stem. In rabbits pentobarbitone reduces the convulsive effects ⁽³⁾. Barbiturates have been used in patients poisoned by cicutoxin ⁽⁴⁾ and successful treatment with large doses of thiopentone has been described ⁽⁵⁾. Ten grams of thiopentone was administered in 24 hours to our patient with oenanthotoxin poisoning and this successfully depressed cerebral electrical activity.

Oenanthotoxin can now be identified by a number of methods ⁽⁶⁾, and measurement has been performed in one previous case - a fatality - where there was 1 mg in 50 ml of stomach contents. In Case 1 ultraviolet absorption spectroscopy revealed the characteristic absorption features of the toxin in the stomach contents although other absorbing materials were also present. High performance liquid chromatography revealed the toxin concentration to be 4

mg/l. Despite the severe toxicity oenanthotoxin was undetectable in plasma or urine (lower detection limit of assay 50 pg/l), and was not detected in the stomach contents of Case 2. It appears that the fatal quantity of oenanthotoxin may be as low as 10 to 20 mg, which is contained in about 20 grams of the *O. crocata* root.

Both patients had a metabolic acidosis. This was extremely severe in the male with a marked base deficit and a high plasma lactate concentration, and it is unusual for such a patient to survive. The plasma chloride concentration was raised but the anion gap was initially 34 mmol/l. The plasma lactate concentration was 10 mmol/l but it would appear that other unmeasured anions were also present. The oenanthotoxin and its metabolites were only present in minute quantities in the plasma and could not have contributed directly, and there was no significant impairment of renal function. The increased lactate concentration was probably due to an increase in anaerobic metabolism as a result of the hypoxia prior to treatment or a direct effect of the toxin on aerobic cellular metabolism.

In this patient the main effective treatment of the acidosis was the mechanical ventilation. This was performed to allow administration of thiopentone and paralysis as treatment for the convulsions and to control correction of the acidosis. The ventilation was adjusted to reduce the arterial Pco₂ which resulted in a further rise in the arterial pH. Sodium bicarbonate was also administered initially but the quantity given was much less than that which would be needed to correct promptly such a severe acidosis. The fall in plasma lactate suggested that the tissue production returned towards normal and that the liver was able to metabolize the lactate present in the circulation.

The marked rises in plasma creatine kinase, aspartate transaminase and lactic dehydrogenase activities in Case 1 may have been caused by the convulsive activity and the anoxia. A direct myotoxic action is also possible, and Case 2, who did not experience hypotension or convulsions, also had a raised creatine kinase and aspartate transaminase.

Poisoning from hemlock water dropwort and related plants is a danger of ingestion of natural vegetation because these plants are widely distributed in Europe and North America and do resemble edible plants. Ingestion of small quantities often proves fatal but prompt identification using an atlas of poisonous plants ^(7,8), and immediate treatment may improve the prognosis.

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2002 - A group of eight young adults on holiday made a curry from plants which they thought to be water parsnips - C. Downs et al.

"Hemlock water dropwort (*Oenanthe crocata*) is perhaps the most poisonous indigenous plant in Britain. It is a member of the Umbellifer family and is found in ditches, damp meadows, in

steams, by riverbanks, and in marshes. It is a large, stout plant between three and five feet high that flowers in July. The lower stem is usually thick and joins to clusters of fleshy tubers that gives rise to the popular name “dead man’s fingers”. The entire plant is poisonous. The tubers, stems, and leaves contain oenanthotoxin, a highly unsaturated higher alcohol, which is known to be poisonous and a powerful convulsant. The majority of the umbellifer family are harmless. These include species of celery, parsley, parsnip, and carrots. The poisonous members are hemlock (*Conium maculatum*), cowbane (*Cicuta virosa*), and hemlock water dropwort. Poisoning by hemlock water droplet is an infrequent event. A number of human fatalities have occurred over the years, although animals are its usual victims.

Case History

A group of eight young adults who were on holiday in Argyll collected what they thought were water parsnips from a small stream. The roots were cleaned, chopped, and added to a curry. All consumed the curry, but the majority of the group only had a small amount of the root, which was easily identifiable in the curry, partly because there was some doubt regarding its nature and partly because of its bitter taste.

Early the next morning, 10 hours after ingestion one of the group had a witnessed grand mal seizure lasting about five minutes. He was taken to the community hospital and was in a post-ictal state. No connection at this point was made with the ingestion of the plant root the night before.

Gradually over the course of the next four hours a number of the group became unwell and nauseated. During this time four of the group consumed the left overs for lunch. One of these individuals, subsequently become increasingly unwell, nauseated, and began to vomit. He had a witnessed grand mal seizures lasting about three minutes. On arrival at the emergency department this person was conscious but vomiting and experiencing visual hallucinations. The patient was agitated, tachycardic, but blood pressure and oxygen saturation were within normal limits. He was hyper-reflexive with dilated pupils, but there were no focal neurological signs. He had one further subsequent grand mal seizure controlled with intravenous diazemuls.

The other patients all had varying degrees of nausea, vomiting, lethargy, sweating, and low grade fever.

Initially it was uncertain from the description as to the identity of the poisonous plant. The community hospital that they were admitted to serves a rural area of Argyll. The police were able to take an asymptomatic member of the group to the stream to recover a further plant. The police knew of a local botanist in the area who was able to positively identify the specimen.

Four of the group required admission to the hospital. The person who had required intravenous diazemules, was observed over the next 48 hours. Biochemical and haematological parameters were all within normal limits, and his symptoms settled rapidly. The other three were discharged after 24 hours.

Discussion

Hemlock water dropwort poisoning is rare in humans and the number of people in this case report is very unusual. The main toxic constituent of hemlock water dropwort is oenanthotoxin. The concentration of this poison in the plant roots is highest in winter and spring and ingestion of very small amounts may prove fatal. These events occurred in April when the concentration of toxin is still high. Oenanthotoxin is, however unstable, and the boiling involved in making the curry resulted in an amelioration of the toxic effects, both in the severity of symptoms, and in the time delay until presentation.

Accidental ingestion of water hemlock most commonly occurs by mistaken identification,

particularly differentiation from water parsnip as in this case. The majority of cases reported have involved children and young adults. The mortality rate is quantity dependent, but has been reported as between 30%–70%.

The clinical features that have been previously reported include nausea, increased salivation, and vomiting. There may be tremor, abdominal cramps, and diarrhoea. Grand mal seizures and opisthotonus can rapidly develop, which may be attributable to antagonism of an inhibitory transmitter in the brain stem. Blood pressure falls, pupils normally dilate, and electrolyte imbalances occur. The latter includes high sodium and potassium and creatinine, a lymphocytosis and very low sodium bicarbonate levels. Increased muscular activity and damage results in a metabolic acidosis. Acute renal failure secondary to rhabdomyolysis has been reported.

Treatment is symptomatic. If vomiting has not occurred before seeking medical advice, which is unlikely, then the stomach should be emptied. Control of seizures is best performed using intravenous diazepam. Phenytoin would be the second line drug of choice. Thiopentone sodium has been recommended for seizure control because of its faster action. Treatment for resistant seizures may necessitate intubation and ventilation.

This episode highlighted some difficulties that can relate to plant poisoning. In this case the cause of the poisoning was not readily apparent, but with the assistance of the local police we were able to locate a plant specimen, and use a local botanist to aid identification. This facilitated an appropriate management strategy, although in this case the treatment was supportive. As a result of this the hospital has now invested in specific resources that relate to plant poisoning, and people in the community who have expertise in plant identification have been identified, and have agreed to be contacted in the event of suspected poisoning. A copy of this list has been distributed to local general practitioners and the police.

It is possible that with increasing interest in “natural” foods accidental poisoning of this nature may become more frequent. These cases illustrate the potential dangers of this, but highlight the fact that even in small communities expertise is available and if accessed appropriately can be invaluable."

(C. Downs, J. Phillips, A. Ranger, L. Farrell, The Mid Argyll Hospital, Lochgilphead. A hemlock water dropwort curry - a case of multiple poisoning, *Emergency Medical Journal* vol. 19 (2002) , p. 472-473)

II. Symptom-Register

1878 - The Encyclopedia of Pure Materia Medica - Timothy F. Allen

Oenanthe crocata, Linn.

Natural order, Umbelliferae.

Common names, Drop-water, Safran-rebendolde.

Preparation, Tincture of the root.

Authorities. 1, Ray, *Philos. Trans.*, 1699, effects in boys, from eating the root; 2, Stalpaart Van der Wiel, *Observ. rarior.*, 1727 (from Bloc, *Monograph on Œ.*, 1873), effects of eating plant; 3, Smetius, 1593, from Stalpaart, effects of eating stems and leaves in a salad; 4, same, effects in a woman, of eating stems cooked with parsnips; 5, Christ. Rost. *Miscell.*, from Stalpaart, effects of eating stems, in several persons; 6, Baldassar, *Timœus on Poisons*, took 7, chap. 4, p. 310 (from Stalpaart), effects in a man, of eating stems; 7, Simon Paullus, *Traité des fièvres malignes* (from Stalpaart), effects of eating leaves in order to cure fever, in three persons; 8, Arnatus Lusitamus (from Stalpaart), effects of eating stems, in a child, aged eleven; 9, Watson, *Phil. Trans.*, 1746, p. 127 (No. 460), effects of eating root, in eleven

French prisoners; also, *Phil. Trans.*, 1748, No. 238, effects on soldiers; 10, Allen, *Synops. Med.*, effects in four children; 11, Ehret, *Phil. Trans.*, 1759, p. 856, effects of five spoonfuls of expressed juice of root, in a man, aged fifty-eight; 12, Pulteney, *Med. and Philos. Comment*, 1784, effects, after every dose, of the juice of the root mixed with wine, taken for the cure of a chronic scaly disease of the skin; 13, Wilmers, *Obs. on Poisonous Vegetables of Great Britain*, 1781, statement of Christ. Ehret, as to the effects of the effluvia when sketching the plant; 14, Dr. Robert Graves, *Med. Facts and Obs.*, 1797, Vol. III, p. 308 (from Berridge, *Pathogenetic Record*), effects of two tablespoonfuls of juice of root, in a woman, aged twenty-four; 15, Duval, *Inaug. Thesis*, 1806, effects of plant, on three soldiers (from Bloc); 16, Parise, *Journ. Gén. de Méd.*, 1823 (Bloc), effects of eating plant, prepared as a salad, on five persons, three of whom died; 17, Dr. Charles, *Archives Clin. de Montpellier*, 1814, effects of eating soup containing the plant, in a woman and child (Bloc); 18, Godefroy, *Journ. de Pharm.*, etc., 1822, effects of eating plant, in three sailors; 19, *Journ. de Pharm.*, 1822, effects of eating plant, in three women; 20, Bry, *Arch. Gén. de Méd.*, 1823, effects of eating plant, in a man; 21, Joseph Fraysell, *Lancet*, 1833, 1, 860, effects of eating root, in a woman; 22, Thompson, *Lancet*, 1836, 2, 850, effects of crushing plant, on a man; 23, same, effects of eating a small piece of the root; 24, Bossey, *Lond. Med. Gaz.*, 1844, p. 289, effects of eating roots, on Wilkinson (one of a number of convicts); 25, same, on Knight; 26, same, on Wilson; 27, on others, same; 28, same, on Chamberlain; 29, same, on Williams; 30, same, on Jeffs; 31, same, on Salt; 32, same, on Burgess; 33, Unger, *Gaz. des Hôp.*, 1846, effects of eating leaves, on a woman and some children; 34, Pickells, *Edin. Med. and Surg. Jour.*, 1847, p. 435, Vol. LXVII, effects of eating the root, in three boys; 35, same, in two other boys; 36, same, effects in a woman; 37, same, in five children; 38, same, in a boy; 39, same, in two boys; 40, same, in a boy; 41, same, from *Cork Southern Reporter*, 1827, effects in four children; 42, same, in a boy; 43, same, in a child; 44, same, in two girls; 45, same, effects of applying a poultice of the plant to a scrofulous ophthalmia, in a woman; 46, same, effects of eating some, in an elderly woman; 47, Nichol, *Assoc. Journ.*, 1854 (*Schmidt's Jhb.*, 86, 316), effects of a strong infusion of plant, taken for erythema, in a woman; 48, *Med. Times and Gaz.*, N. S., 13, 1856, p. 205, effects of root, in three sailors; 49, *Friedrich's Blatt. f. Ger.*, Aug. 1856 (*A. H. Z.*, 54, 152), effects of the expressed juice of the root; 50, Grahame, *Med. Times and Gaz.*, 1858, N. S., 16, p. 241, effects of eating root; 51, Appleton, *Brit. Med. Journ.*, 1861, March, p. 293, effects of eating plant; 52, same, report of another case; 53, same, quoted from Dr. Hooper's *Med. Dict.*, effects of eating root, in several persons; 54, Baume, *Med. Times and Gaz.*, 1862 (from *Archives des Mal-mentales*, 1861), effects of eating root, in a man; 55, same, another case; 56, Vacher, *Journ. de Méd.*, 1863, effects of a soup containing the leaves and roots, in seventeen soldiers (from Bloc); 57, Vincent, *Gaz. de hebdom. Méd.*, Paris, 1864, effects of eating the herb; 58, Popham, *Brit. and For. Med.-Chir. Rev.*, 1866, p. 544 (*Dubl. Quart. J. of Med.*, 1865), effects in some boys; 59, same, effects in one boy; 60, Dr. Kimball, *Am. Hom. Obs.*, 1867, p. 70, effects of eating the root, in a boy; 61, Kane, *Med. Times and Gaz.*, 1869, 2, 379, effects of eating the leaves, in a child; 62, Bloc, effects of eating root, in several persons; 63, Nevins, *Assoc. Med. J.*, Vol. II, effects of eating roots, in a young boy; 64, *Pharm. Journ.*, 3d ser., Vol. I, p. 1110, effects of eating the root, in a man; 65, *Journ. de Chim. Méd.*, 1870 (Bloc), effects of getting the alcoholic solution of the extract on the hands; 66, Gayet, *Essai sur l'Énanthe*, 1870, poisoning of several persons by eating the herb; 67, same, effects of eating the root, in a soldier; 68, *Journ. of Botany*, 1870, Vol. VIII, p. 255, effect of eating root, in a man; 69, *Pharm. Journ. and Trans.*, 1875 and 1876 (*Manchester Guardian*), effect of eating the root, in several persons (from Berridge, *Pathogenetic Record*); 70, same, additional effects, 1871, Vol. I, p. 110; 71, Foss, *Practitioner*, 1876, p. 248, effects of eating root, in nine children; 72, *Taylor's Med. Juris.*, Vol. I, p. 422, two laborers ate some of the roots; death after about three hours.

Mind

***Furious delirium**, [4].

Delirium, [7], [16], [23], [49].

Very marked symptoms of maniacal delirium, [3].

Delirium and insensibility; restless, and with difficulty kept in bed; when roused he did not speak, but stared vacantly, and seemed in a state of madness (after seven hours and a half); still restless and insane (after twenty-four hours); delirious (ninth and tenth days), [31].

*Delirium like delirium tremens; the patients constantly moved from place to place, talked without cessation, and without knowing what they said; they grasped at imaginary objects, [33].

Excessive excitement; she talked to herself, swore and blasphemed, while at the same time she was seized with convulsive laughter, [33].

The patients refused everything that was offered, and constantly endeavored to escape, so that it was necessary to keep constant watch over them, [33].

One ran mad, but his reason returned next morning, [1].

Semi-delirium in almost all, [30].

(10) Approaching delirium (twelfth day), [32].

In one the most prominent symptom was extreme restlessness, approaching to mania, [50].

Lost control of myself and was unconscious of what I was doing or saying, [3].

When slapped on the cheeks he bounds up indignantly, stammering out in pitiful remonstrance, "Wisha, don't, then," and covers his head impatiently; he is immediately buried in unconsciousness again (after four hours), [59].

It seemed to her as if she were flying, [4].

Depression of spirits (second day), [58].

It seemed to her as if she were flying, [4].

Depression of spirits (second day), [58].

Great oppression, with extreme anxiety, [3].

Moans (second day), [31].

Temper irritable (third day), [59].

General malaise, [15], [33].

(20) Much confused in intellect, and vacant in expression (second day); consciousness has quite returned, but all is a blank since he ate the root up to this morning (third day), [59].

She thought that she was transported to a very great elevation, [4].

They were all absolutely unconscious, [71].

Loss of sensibility, [23].

Complete insensibility, [61].

In a state of insensibility (after one hour and a half), [21].

Insensible, [25], [63], [72].

Lies in a state of stupor, sleeping much, in the evening (third day), [31].

Slight stupor (after six hours and a half), [28].

Stupor for several days, [40].

(30) Lay for some hours in a stage of stupor, [38].

Slight symptoms of coma (after six hours and a half), [30].

Coma, [23].

Head

Vertigo

Vertigo, [2], [12], [15], [43], [49], [50], [67].

Vertigo like intoxication, [5].

The first attacked was seized with vertigo and fell; the other, while placing him on his back, fell also, [35].

Dizziness in the head (one case), [53].

Felt dizzy and strangely (after twenty minutes), [60].

Dizziness in his head for some time, [9].

Giddiness, [27], [51].

(40) Great giddiness, with vast uneasiness and sickness at stomach, but no vomiting (after ten or fifteen minutes), [14].

Complained of giddiness, and immediately fell to the ground, [36].

Giddy, in one case, [50].

Giddiness (second day), [58].

Giddiness (eleventh day), [30].

Giddy, so that several times he was obliged to quit the room and walk out in the fresh air to recover himself; but when the doors and windows of his room were opened, he could finish his work without giddiness, [13].

General Head.

Headache and giddiness (seventh day), [30].

Headache, [58].

Violent pain in the head, [57].

Pain in the head (second day), [32].

(50) Pain in head (fifth day), [28].

Complained greatly of pain all over him, but particularly in the head (after one hour and a half), [11].

Eye

Eyes very much sunk (ninth day), [31].

Eyes full and projecting, pupils dilated, [72].

It inflamed the eye much, and caused the other eye to swell and inflame, [45].

Injection of the eye (seventh day), [39].

Lid and Ball.

Eyelids spasmodically closed (after four hours), [59].

Eyelids half closed (after six hours and a half), [28].

Eyeballs drawn upward and inward and firmly fixed, [61].

Pupil.

The pupils of the eye in all cases were widely dilated; the eyes themselves were fixed, and were never moved, the retinae being apparently insensible to light, as the children never manifested any sign of recognizing those who were attending to them, [71].

(60) Pupils very much contracted, [67].

Pupil of eye contracted to the size of a pin's head (after one hour and three-quarters), [21].

Pupils first contracted, afterwards dilated, [63].

Pupils dilated; expression uncertain and haggard, [33].

Pupils dilated and insensible, [59].

Pupils dilated, [25], [26], [27], [38], [55].

Dilatation of pupils, for several days, [40].

Much dilatation of the pupils, and redness of the eyes, [34].

Vision.

Vision impaired, [49].

Disturbance of vision, [57].

(70) Obscuration of vision, [6].

Saw nothing on awaking, [8].

Ear and Nose

Heard nothing on awaking, [8].

Tip of the nose very red (second day), [31].
Hæmorrhage from the nose (in one case), [2].

Face

Swelling of the face, [22].

***Rapid convulsive twitching of muscles of face**, [61].

Face swollen, flushed (second day), [32].

Face flushed up during his struggles, livid when quiet, [59].

Face flushed (second day), [31].

(80) Face congested (after seven days), [31].

Face black (after one hour), [64].

Face swollen and livid, [25].

***Face livid and turgid**, [63].

Face livid (sixth day), [31], [72].

Face pale and cold, [61].

Pallor of face, [27].

The face immediately became very pale, and he said he felt as though he had eaten some tobacco, [57].

Pale face, [25], [55].

Features very pale, [33].

(90) Ghastly pallor of the cutaneous surface of the face, with blackening round the eyelids, [71].

Looked pale, [26].

Countenance anxious (after eleven days), [32].

Countenance anxious, depressed (after six hours and a half), [28], [32].

Lips.

Lips livid (after seven hours and a half), [31].

Lips blue (seventh day), [30].

Jaw.

An emetic was with great difficulty forced down, on account of his jaws being, as it were, locked together, [9].

Jaws closed fast, so that very little could be given him, [11].

Jaws rigidly closed, [63].

Jaws locked (in one case), [53].

(100) Two boys, aged five and eight, were lockjawed, and after writhing in pain for some hours, died, [69].

Jaws closed spasmodically, [61].

Impracticable to introduce emetics by the mouth, notwithstanding the use of a dilator, in consequence of spasm of lower jaw, [40].

In one instance, owing to the spasm of the jaw, no emetic could be introduced, [34].

***Muscles of mastication in rigid spasm**, [61].

Mouth

Tongue.

Convulsive movements of the teeth, [72].

Tongue half bitten through about an inch from the vertex, [61].

Tongue sore and swollen (second day); raw at tip and edges (third day), [59].

Tongue swollen and protruded, [72].

Tongue protruded with difficulty, swollen, white, blistered (second day); white, its edges ulcerated (third day); coated, moist, red at the tip (fifth day), [31].

(110) Tongue swollen (after six hours and a half); red at the tip (second day); white (fourth

day); moist (sixth day); coated, moist (after seven days), [32].

Tongue slightly coated (second day); white (third day), [28].

Tongue moist, slightly furred (seven day), [30].

Tongue slightly coated (sixth day), [29].

Tongue clean, moist, and trembling, [32].

General Mouth.

Foaming at the mouth, [38], [51]; (after one hour), [64].

He foamed considerably at the mouth, [11].

Frothy mucus, with blood about their mouths, [72].

Bloody mucus oozed from the mouth, [63].

Mouth dry and parched (second day), [28].

(120) Mouth parched (third day), [31].

Speech.

Loss of speech, [59].

Speechless (after one hour and three-quarters), [21].

Speechless, [25], [72].

Throat

Much mucus in the throat (second day), [32].

Pressure on the throat gives pain; it is sore when he swallows (fifth day), [31].

Inflammation of the throat and pharynx, [19].

Inflammation of the throat and œsophagus, [18].

Constriction of the throat, [58].

Sensation of burning and constriction in the larynx, [49].

(130) Burning heat in the throat, [16].

Burning heat in the throat and stomach, [2].

Heat in throat, [23].

Great heat in the throat, [20].

Violent heat in throat and stomach, [10].

Great heat in the throat and stomach, [3], [18].

Loud rattles in the trachea (after six hours and a half), [32].

To make him swallow was impossible, [25].

She had lost the power of deglutition (after one hour and three-quarters), [21].

Stomach

Appetite and Thirst.

Total loss of appetite, [50].

(140) Thirst (eleventh day), [30].

Thirst (third day), [31].

Desires cold drinks, in the evening (third day), [31].

Eructation and Hiccough.

Constant and continued eructations strongly flavored by the plant, [50].

Hiccough, [5].

Very distressing hiccough, [6].

Cardialgia, [2].

Nausea and Vomiting.

Nausea, without vomiting, [67].

Nausea, [2], [58], [66].

Frequent nausea, without vomiting, [57].

(150) Nausea and vomiting, [15], [49].

Nauseated, and vomited up nearly the whole of the root (after twenty minutes), [60].

Nausea and sickness, which were soon relieved, if vomiting supervened, [12].
Vast uneasiness and sickness at stomach, but no vomiting, with great uneasiness (after ten or fifteen minutes), [14].
Vomiting, [46].
Vomited blood, [63].
Vomiting and diarrhoea, [47].
They vomited in their fits, [10].
Great retching; at the first attempt he threw up about half a pint of clear watery liquid; at the first and third attempts hardly anything, [11].
Tenderness at stomach (eleventh day), [30].
(160) Acute pain in the stomach, [19].
Pain in pit of stomach, with slight fever (eighth and ninth days), [31].
Pain in the stomach, [38].
Violent pains in the epigastric region, [49], [57].
Pain in the epigastric region, [67].
Burning in the stomach, [58].
Heat in stomach, [23].
Biting heat in the epigastric region, without nausea, [17].
"Warmed her stomach very much," [36].

Abdomen

Abdomen distended like a balloon, [17].
(170) Distension of the abdomen, [49].
Abdomen greatly distended, [38].
Sudden distension of the abdomen, with shortness of breathing (second day), [28].
Belly greatly swelled, [11].
Abdomen rather hard (eleventh day), [30].
Violent colic, [49].
Colic pains in the abdomen (second day), [58].
Tenderness, hardness, and pain in the abdomen (second day), [38].
Belly very tender (third day), [31].
Gripping or severe tormina, [50].
(180) Tumescence of the abdomen, [42].
Cough gives pain in the region of the liver and in the head (second day), [32].
The slightest touch on any part of the abdomen causes great pain (second day), [31].

Rectum and Stool

Great desire for stool, which went off in three minutes, [11].
Diarrhoea, [2], [49].
Bowels moved involuntarily (after seven hours and a half), [31].

Urinary and Sexual Organs

Micturition painful (after five days), [31].
Urine plentiful, dark-colored, turbid (eleventh day), [31].
Increased flow of urine, in which there was a copious sediment, [12].
Urine clear, high-colored (fifth day), [31].
(190) Passed a pint of urine, reddish, and depositing a copious white sediment (second day); urine reddish, thick, high-colored (third day); dark, with sediment (fifth day); plentiful and still thick (tenth day), [32].
No urine since midnight, at 10 A.M.; thick, dark-colored, at midnight (second day); plentiful, dark-colored, with a thick yellowish sediment (third day); free, dark-colored, with sediment

(fifth day), [28].

Semi-priapism (second day), [32].

Respiratory Organs

Voice.

Very hoarse (seventh day), [31].

Cough and Expectorations

Coughs slightly, and expectorates with difficulty a reddish mucus (second day); expectorates a thick reddish mucus (third day); expectoration bloody (fourth day); cough troublesome, sputum dark, but not so bloody (seventh day); expectoration copious (ninth day); very copious, loose, and less bloody; easy, and becoming white (tenth day), [32].

Short cough (second day), [31].

Much mucus in the throat raised with freedom (second day); expectorates a white frothy phlegm (third day); expectorates a heavy greenish-yellow matter (fourth day); frequent cough, with copious purulent expectoration, in the forenoon; cough and expectoration frequent, in the evening (sixth day); spits a large quantity of heavy purulent mucus (seventh day); expectorates with great difficulty the same dark-greenish matter (ninth day), [31].

Respiration.

Spasmodic respiration, [63].

A convulsive attempt at respiration was made to expel the blood and froth from the mouth, [61].

Breathing convulsive, [26].

(200) Breathes heavily (second day); breathing short, in the morning; laborious, hurried, with loud tracheal rattles, in the evening (third day); breathing easier (fourth day); much shorter (seventh day); more oppressed (eighth day); laborious (ninth day); very short (tenth day); slight mucous rattle in the trachea (eleventh day), [31].

Breathing labored, [23].

Breathing stertorous and labored, [72].

Breathing hurried (after seven hours and a half); labored (second day), [31].

Breathing short (after six hours and a half); hurried (second day); hurried, slight rattling in trachea (second day); short and difficult when she moved (seventh day); loud mucous rattles in the trachea (eleventh day), [32].

Shortness of breath, with sudden distension of the abdomen (second day), [28].

Breathing slow and labored, interrupted by constant sighing and convulsive cough, [59].

Difficult respiration, [6].

Breathing free (after one hour and three-quarters), [21].

Respiration very difficult, [49].

(210) Occasionally there was a sudden cessation of breathing, followed by a catching sigh, indicating probable spasm of the diaphragm, [71].

Respiration hardly perceptible, [61].

Chest

Chest firmly fixed, [61].

On the right side of the chest there is dullness on percussion, the natural murmur wanting, a short bronchial sound; on the left side, sonorous rattles; the heart's action quick, weak, with a thrilling sensation communicated to the hand (fifth day), [32].

Pain in chest and abdomen (second day), [28].

Pain in the right side under the ribs (eleventh day), [30].

Pain in breast (after six hours and a half), [32].

Pain in breast (after ten hours and a half), [29].

Heart and Pulse

Pain in the heart, [6].

Acceleration of the pulse, [22].

(220) The pulse at first was about 100 in the minute, but it soon became hardly perceptible, and in all the cases was imperceptible for hours previous to death, [71].

Pulse feeble, at 8 A.M.; soft, greatly accelerated, in the evening (third day); fuller, about 100, at 8 A.M. (fourth day); soft, 112, at 1 P.M. (fifth day); feeble, 120, at 10 A.M. (seventh day); soft, feeble, very frequent (eighth day), [31].

Pulse frequent and feeble, at noon (second day); 108, soft (fifth day); soft, 90 (seventh day); very small and feeble (eleventh day), [32].

Pulse 84, feeble and irregular (first day); 84, rising to 108, on sitting up (second day), [59].

Pulse soft, feeble, 78, much accelerated by slight exertion (second day), [31].

Slow feeble pulse, [27].

Feeble pulse, [55].

Pulse very small, feeble, rather slow, [33].

Pulse soft, irregular, 48 to 52, [67].

Pulse 40, small and wiry (after one hour and three-quarters), [21].

(230) Pulse almost imperceptible, [63].

"Pulse scarcely to be felt" (first case), [39].

Pulseless, [54].

Extremities

Lost the use of his limbs (after one hour and a half), [11].

Arms flexed at elbow in a right angle, [61].

Irritation of the hands and arms, with sharp lancinating pains, [22].

Rapid convulsive twitching of muscles of hands, [61].

Hands firmly clenched, [63].

Tendency to cramps in lower extremities, [50].

Legs stretched straight out, [61].

Generalities

(240) *He fell back, foaming at the mouth and black in the face, [70].

"Gave a leap" and then fell, receiving, in the fall, a severe injury to the forehead (one case), [34].

Trunk powerfully bent forward, [63].

All reflex excitability was gone; irritation of the fauces; by putting in the stomach-pump did not in the least excite any tendency to vomit, [71].

One lost his hair and nails, [1].

It was impossible to get them to swallow anything, [71].

They never spoke or uttered any cry indicating that they were in pain, [71].

One seemed "rather mesmerized than comatose," [34].

Risus sardonicus, and other symptoms, [43].

Reeling, [55].

(250) Long-continued rigors, and it almost proved fatal (after a tablespoonful), [12].

In a state of almost immovable rigidity; insensible, moaning, and breathing stertorously; countenance livid; eyes fixed; pupils dilated; sanguineous foam issuing from the mouth; intense action of the dorsal and lumbar muscles, or opisthotonos; the pulse very feeble, and the heart's action even scarcely perceptible; lower jaws firmly locked; the tongue much injured and slightly protruding; in eight or ten minutes from the time of first seeing him, he expired gently and without a struggle, [50].

Severe rigors, [27].

Body rigid, [61].

Rigors, [23].

They were in great agonies, with violent heat in stomach and throat, before they fell into convulsions, [10].

Occasional general convulsions, [72].

The convulsions were not of the body, but of the mouth, face, and extremities, [34].

In about half an hour they were all seized with symptoms of poisoning, and one died soon after in strong convulsions, [48].

When placed in a sitting posture, his head would fall forward or backward, or to the shoulder, but when replaced on the pillow he tossed his head from side to side, accompanied by jactitations of the hands, [59].

(260) Jactitation, if not convulsions, in almost all, [50].

Numbness, nausea, horrid convulsions, and at last tetanic stiffness, coma, and death; almost all died, [62].

The first attacked with symptoms of poisoning was a boy, aged three years; whilst eating a cake he fell down in convulsions, and was quite unconscious (after a quarter of an hour); he remained this way till 10 o'clock that night, when he died. Immediately afterwards, a little boy, aged five years, and a girl, about the same age (both of whom had had some of the root), were attacked in the same way. The boy died about 7 o'clock that evening; the girl recovered. In another house, a girl, aged six years, was attacked, together with a boy about the same age. The girl died the next afternoon about 4 o'clock; the boy recovered. There were others affected, but in a lesser degree. The signs of poisoning were the same in all the cases; about fifteen minutes after eating the root they became unconscious, and were violently convulsed, at the same time the jaws were closely locked, the mouth covered with foam, in some cases mixed with a little blood; the convulsive fits recurred, one after another, with extreme rapidity, there being scarcely an interval of half a minute between each; in the case of the girl, who lived nearly a day, there was considerable opisthotonos, or arching of the back, on the second day, which had taken the place of the violent general convulsions of the previous evening; about three hours before she died the convulsions ceased altogether; she, however, remained in a state of coma till her death; the other two died in the convulsions, [71]. In one hour, some fell into syncope and convulsions; one died before the doctor arrived, two hours after supper; a second was expiring; a third showed no signs of life but trembling and convulsions. The activity of the poison was so sudden that I saw two fall into a swoon, whilst, at perfect ease about themselves, they were busily lavishing attention upon their sick comrades. Guillaume Trelacheau, a man of strong and robust constitution, seemed the most hopeless. The upturning of his eyes, **the contraction of his lower jaw**, the feebleness of pulse, the inability to move, feel, or know anything, with a universal chill spread over his body, seemed to be so many signs of death. After vain attempts to give an emetic, I had him rolled and well shaken in a blanket, by eight men, for two hours; he recovered warmth, and then insensibly movement and life; the first signs were efforts to vomit, which, aided by the emetic, were effectual. The vomiting went on for days, take what he would. He fell asleep for fifteen hours. The third day his tongue was extremely sore and swollen from biting during the convulsions. **He remembered nothing that had befallen him** from the first to the third day of his illness, nor of the circumstances that had accompanied, nor those which had caused it, [56].

The eldest suddenly fell backwards without any premonitory symptoms, and lay kicking and sprawling on the ground; his countenance soon turned very ghastly, and he foamed at the mouth (after four or five hours); soon after, four more were seized in the same way, and they all died before morning, not one having spoken a word, [1].

Terrible convulsions, followed by tetanic rigidity, coma, and death, [66].

Most violent convulsions and death in less than an hour from the time of taking the poison.

They mangled their tongues in a shocking manner, [44].

Violent convulsions, solely affecting the flexors throughout the body, [63].

Violently convulsed, and in the space of **one hour** was a corpse, [36].

Strongly and repeatedly convulsed, and appeared to be hastening into an apoplectic condition; death in a quarter of an hour, [25].

(270) Dreadfully convulsed for some hours, and died in the most excruciating agony, [41].

Very severe convulsions, which, in about fifteen minutes, deprived him of his senses, and continued, with a few intermissions, till he died, which was in about three hours and a half, [11].

Fell convulsed; struggled so violently that several strong men could scarcely hold him; he suddenly died in a fit (after one hour and a quarter), [26].

Fell down convulsed, and died within a quarter of an hour, [51].

Fell down in strong convulsions; the struggling was soon over, and he became better, but retained a wild expression of countenance, which was pale, and in a short time he had another fit; about half an hour later it was manifest that he was dying; his bloated livid face, the sanguineous foam about his mouth and nostrils, the stertorous snort and convulsive breathing, extreme prostration and insensibility plainly indicated that every remedial measure would be useless; he died in five minutes, [24].

Very violent convulsions succeeded each other with very great rapidity, and were followed by death, [15].

Convulsions soon came on, and she lost her senses (after ten or fifteen minutes); in half an hour more the convulsions had become stronger and quicker; no sensibility; mouth firmly open; scarcely any pulse at the wrist, and extremities cold; she soon died, [14].

Seized while stepping from the boat; insensibility, convulsions, foaming at the mouth, and almost instantaneous death, [52].

Loss of speech and consciousness, followed by terrible convulsions, which lasted three-quarters of an hour, and terminated in death; during the convulsions the teeth were tightly closed by trismus, [20]].

In about an hour he became unconscious and convulsed, and in half an hour more he died, [68].

(280) Convulsed, and died in a few minutes, not more than half an hour having elapsed between the first symptoms and death, [54].

In five of the cases, including the man who died, the spasmodic accessions were severe and successive, [50].

Long in a very precarious state, passing through alternations of tetanic convulsions and insensibility, [59].

Convulsions, with tetanic closure of the jaws and frothing at the mouth, followed by death, [49].

Convulsions, followed by death, [47].

Three were seized with convulsions, and two died, [9].

Convulsions, and in one case death, [53].

Convulsions, followed by sound sleep; on awaking she neither saw nor heard anything, and being carried home, died immediately, [8].

Convulsions; other symptoms of vegetable poisoning, and in one case death, [37].

Fainted and fell in convulsions, [38].

(290) ***Convulsions**, [10], [23], [27], [39], [42], [57].

In two of the cases it was observed that the access of the convulsions, which were alternated with sopor, was always preceded by an acceleration of the pulse, [34].

In the intervals of the convulsions the girl, aged six years, during the earlier part of her illness, protruded her tongue as far as she could, as if there were something at the base she wished to get rid of, [71].

Spasms, followed by death, [60].

Spasms, [18].
Restless, endeavoring to get up (eleventh day), [32].
Restless, after a fit, [26].
Debility, [50].
Debility, confining him to the bed for many days, [40].
Slight symptoms of exhaustion (after six hours and a half), [30].
(300) Much weakness, [27].
Prostration, requiring small doses of brandy and ammonia, in one or two, [50].
His exhaustion rendered it necessary to convey him, even with care, in a cot, to the hospital, [31].
He felt ill, and having walked on a little farther, he had to rest (after one hour and a half), [11].
Faintness, [47], [67].
Fainting, [18].
Faint and collapsed (seventh day), [30].
Still slightly collapsed (after six hours and a half), [32].
Attacks of syncope (sixth day), [29].
Cannot bear to be moved (third day), [31].
(310) Cannot bear to drink anything hot (third day), [31].
Cutaneous sensibility greatly exalted; when touched he manifests great uneasiness (second day), [31].
Great tenderness on the right side (seventh day), [32].
Cramps, [46].
Acute pain, [46].
Pain, all along the course of the crural and sciatic nerves, commencing in the spinal column, more especially the lumbar region, [50].
Great pain in the left side; it is very tender when touched (third day), [31].
Pain in left side (second day), [31].
Slight pain in left side (eleventh day), [31].
Pain in the side (second day), [32].
(320) The pain is more severe in the right side (after ten hours and a half), [32].

Skin

Irregular rosaceous spots covering nearly the whole face; these spots were not elevated above the skin; they appeared also on the abdomen and arms, [17].
Small red spots on the chest, face, and upper extremities, [49].
Red ecchymosed patches on the face and chest, [23].
Roseola, on the abdomen, in patches (after a few hours), [59].
Eruption on the hands and arms, [22].
Eruption, accompanied by engorgement, redness, and pruritus (after three hours), [65].

Sleep

Drowsy (after six hours and a half), [28].
Sleepy (second day), [31].
Sound sleep, [8].
(330) Sleepy; roused with difficulty (after six hours and a half), [24].
Great tendency to sleep, [67].
In a deep sleep, snoring loudly and moaning (after four hours), [59].

Fever

Extreme coldness (second case), [2].
"Deadly cold and pale" (first case), [39].

The skin was cold, especially the hands and feet, which were blue long before death, [71].
Skin cold and moist, especially over the hands and forehead (after one hour and three-quarters), [21].

Hands and face cold (seventh day), [30].

Extremities cold, [67].

Coldness of the extremities, [27].

(340) Loss of animal heat (second day), [58].

Burning heat, that mounted to the head, [17].

Violent heat of the head, [49].

Hot and feverish (second day), [32].

Face, nose, ears, and lips excessively hot and flushed, in the evening (third day), [31].

Skin hot (after three days), [31].

Slight fever, with pain at pit of stomach (eighth and ninth days), [31].

A profuse sweat accompanied all the symptoms, [11].

Very offensive perspiration over the whole body, [49].

Cold sweats (after a tablespoonful), [12].

Conditions

Aggravation.

(Morning), Breathing short; 8 A.M., pulse feeble.

(Evening), Desire for cold drinks; breathing laborious and hurried; pulse accelerated; face, nose, and lips flushed; sleepy.

(Exertion), Pulse accelerated.

(Sitting up), Pulse accelerated.

(Pressure on part), Pain in throat.

(Walking in close room), Giddiness.

(Water), All symptoms, [19].

(Timothy F. Allen, The Encyclopedia of Pure Materia Medica, Boericke & Tafel, New York and Philadelphia, vol. 7 (1878), Oenanthe crocata, p. 128-137)

Heilungen / Cures



Übersicht

1883 - Attaques d'épilepsie chez une jeune fille de 16 ans, fille d'un père adonné aux boissons alcooliques - Dr. Wabasch

1892 - Epileptic convulsions in a girl aged 16 years - F. H. Fisk

1886 - Epileptische Krampfanfälle bei einem 14jährigen Mädchen - Oscar Hansen

1896 - Epileptiform convulsions since the first pregnancy in a woman 32 years old - Joseph S. Garrison

1896 - Epileptic attacks in a man who was wounded by a piece of shell striking his forehead at the battle of Gettysburg - J. S. Cooper

1883 - Attaques d'épilepsie chez une jeune fille de 16 ans, fille d'un père adonné aux boissons alcooliques - Dr. Wabasch

"Dernièrement nous avons trouvé dans la *Revista Homoeopathica Catalana* (30 avril 1883) une observation intitulée: *Epilepsia curada por oenanthe crocata*, par el D^r Wabasch. Bien que nous ne connaissons pas la langue espagnole, nous avons pu la comprendre et la trouver intéressante. Nous avons eu recours à l'obligeance du D^r René Serrand (médecin consultant à Caunterets) qui nous a donné la traduction suivante:

L. J. jeune fille de 16 ans, irlandaise, de complexion délicate et débile, fille d'un père adonné aux boissons alcooliques. A neuf ans elle eut des attaques d'épilepsie, avec convulsions spasmodiques, salivation et perdant complètement la connaissance durant les spasmes. Les attaques étaient si fréquentes, qu'elle en avait plusieurs en vingt-quatre heures.

Pendant un an le traitement au bromure de potassium parut les avoir supprimées, et elles ne revinrent que lorsqu'elle eut douze ans. A cet âge elle en eut plusieurs pendant la nuit, et le jour suivant, apparut la première fois la menstruation. Depuis lors elle eut fréquemment des accidents pendant le jour, elle en avait également plusieurs chaque nuit, toujours lorsqu'elle dormait. Ses époques venaient très irrégulièrement, manquant souvent pendant plusieurs mois.

Lorsqu'elle vint me consulter, il y a maintenant une année, elle avait plusieurs crises chaque nuit, de sorte qu'elle pouvait à peine dormir. Elle était très faible, avec couleur ictérique et sa physionomie était comme imbécile. L'appétit capricieux.

Le 21 août 1881, je lui donnai *oenanthe crocata* et quand elle revint le 10 septembre, elle n'avait plus une seule attaque depuis qu'elle avait commencé à prendre les globules. J'en fus étonné. Le changement de la physiognomie était notable est décidé, l'appétit était bon, elle se trouvait beaucoup mieux. Elle continua l'*oenanthe* et le 17 septembre elle allait beaucoup mieux, les règles étaient régulières ces derniers jours. Le 7 octobre, je lui donnai encore cette fois quelques doses du médicament, depuis ce jour j'ai cessé.

J'ai eu l'occasion de la revoir et je suis assuré que depuis un an, elle n'a rien éprouvé de fâcheux; ses règles viennent avec beaucoup de régularité. Les yeux ont l'éclat naturel, son aspect est satisfaisant, elle a toutes les apparences d'une parfaite santé.

Qui nous donnera de nouvelles expérimentations de l'*oenanthe*?

Nous ne pouvons que nous associer au vœu du D^r Wabasch. Si de nouvelles expérimentations de l'*oenanthe crocata* dans l'épilepsie donnaient de bons résultats, les malades seraient soustrait à l'administration du *bromure de potassium* qui amène souvent tant d'inconvénients et même d'accidents, quelquefois mortels. C'est ce que nous avons établi dans l'analyse que nous avons faite du mémoire de M. Auguste Voisin couronné par l'Académie de médecine. (Voir avril 1873, Tome XXXVI de l'*Art médical*, page 279 à 295)."

(E. Hermel, Guérison de l'Épilepsie par L'Oenanthe crocata, L'Art Médical tome 57 (1883), p. 50-52)

1892 - Epileptic convulsions in a girl aged 16 years - F. H. Fisk

"Miss H. E. G., aet 16, sanguine temperament, well grown, robust appearance, but dyspeptic. When 8 years old would have spells of absent-mindedness. Would be listless and inattentive for a few minutes, then would be all right. Health at that age good. These absent-minded spells would occur at irregular intervals, and recurred up to date of applying to me for treatment for epilepsy. Menstruation began at about the age of 12; epileptic convulsions were manifest about the age of 14, and grew more frequent and more intense with time. Had been under treatment by Allopaths, Homoeopaths, and Eclectics. For the past six months the patient would have six to ten convulsions in twenty-four hours, if not kept stupefied with bromide of potash. It would require from sixty to one hundred grains per day to control the condition. The mind was beginning to show feebleness, and the functions of the body were subnormal. The convulsions did not occur at or near the menstrual period any more than at other times.

I prescribed tincture *Oenanthe crocata*, minims 5, water 6 ounces, mix. Directions, give a teaspoonful every three hours until there was some complaint of headache, then only every four to six hours, during the day, as would be necessary to control the convulsions. Result, not another spasm. The medicine was continued for three months and then omitted. At that time a little mental excitement brought on a convulsion. The medicine was resumed and continued for three months longer. No more convulsions, and the absent-minded condition had disappeared. The young lady became gay, cheerful, with active mind, and entered society and took part in social entertainments as did other of her associates.

When the remedy would be withdrawn for a short time a little mental excitement or mental fatigue would cause an epileptic seizure. The remedy was continued, gradually reducing the dose, for a period of about two years. Since that time more than a year has elapsed, there has been no indications of epilepsy and no sequelae. I have treated five other cases with like results."

(F. H. Fisk, M.D., Mineral Hill Springs, Tennessee, *Oenanthe crocata*, The Homoeopathic Recorder vol. 7 (1892), p. 80-81 - from Chicago Medical Times)

1886 - Epileptische Krampfanfälle bei einem 14jährigen Mädchen - Oscar Hansen

"Maren L., 14 Jahre alt, Tochter eines Häuslers in Alönderup bei Milleröd, kam am 6. April 1884 in meine Behandlung. Krank seit zwei Jahren. Allopathische Behandlung mit grossen Bromkaliumdosen u. s. w. ganz ohne Besserung. Krampfanfälle ganz wie epileptische. Die Anfälle fangen mit Geschrei an, dann fällt sie nieder. Ist ohne Bewusstsein, klonische Krämpfe in den Gliedern, Schaum vor dem Munde, rollende Bewegung der Augäpfel. Die Daumen fest eingeschlagen in der Hohlhand. Oft geht Harn und Stuhl ab während des Anfalls. Keine Aura. Die Anfälle kommen bald 3 bis 4 Mal in der Woche, bald alle zwei Wochen. Nach den Anfällen schläft sie 5 bis 6 Stunden und nachher hat sie Schwere im Kopfe und fühlt sich matt und abgeschlagen. Gedächtnis etwas geschwächt. Während der Anfälle ist sie bald bleich, bald rot im Gesichte. Die Patientin ist kräftig gebaut, noch keine Menses.

Vergebens wurde hier Cuprum met. 12., Belladonna 3., Ignatia 3., Pulsatilla 30. in Glob. sacch. 9 Tage mit 4 Tagen Pause gegeben. Wohl kamen die Anfälle nicht so häufig, aber waren doch heftig. Am 2. November war der Zustand wie oben, die Anfälle nicht so häufig, *aber die Krämpfe waren auch im Gesicht heftig, das Gesicht oft während der Anfälle bleigrau und wie geschwollen.* Ordination: *Oenanthe crocata* 3. 3 Tropfen Morgens und Abends 9 Tage, Pause 4 Tage abwechselnd.

Bis 7. Dezember hatte sie keinen Anfall gehabt, im Januar und Februar 1885 zwei unbedeutende Anfälle jeden Monat, im April, Mai und Juni einen Anfall, und später war sie

ganz gesund. Gedächtnis ist gut, alle Funktionen normal, die Gesichtsfarbe gut und als ich im Februar 1886 das Mädchen sah, gab sie an, dass die Menstruation vor 14 Tagen zum ersten Mal eingetreten sei und dass sie ganz wohl sei. Sie benutzte Oenanthe crocata bis August 1885, dann gab ich zuletzt Sulphur 30. 3 Tropfen Morgens und Abends."

(Dr. Oscar Hansen, homöopathischer Arzt in Kopenhagen, Mittheilungen aus meiner Praxis in den Jahren 1876 bis incl. 1885, Nr. 39, Allgemeine homöopathische Zeitung Bd. 113 (1886), S. 69)

1896 - Epileptiform convulsions since the first pregnancy in a woman 32 years old - Joseph S. Garrison

"Mrs. T., aet. 32 years, came to me on Nov. 16, 1894, with the following history:

As a child, good health; menstruation commenced at 16 and continued regularly, the period being 25 days, flow lasting from 5 to 7 days and profuse. At first there was no pain but as she grew older had some distress.

Married at 23; has had two children, the first 18 months after marriage, the second seventeen months later. About the 4th month of her first pregnancy she began to be troubled with sensation of weight and pressure in pelvis and groins so she could hardly walk, which continued up to confinement. At the sixth month she had the first convulsion, and two more between that and confinement. There was no swelling of feet nor as far as I could learn any other evidence of albuminuria. During the afternoon of each of the three days previous to confinement she had a sensation as if she had been struck on the side of the head, and fell, followed by severe headache, but no loss of consciousness; this headache continued up to the delivery of the child. She had no more convulsions until after the baby died at five months when she had a convulsion; but 3 months later she became pregnant again and at once the convulsions commenced, continuing at irregular intervals until confinement, when they ceased while she was in bed, but came on again as soon as she began to move around.

At this confinement she suffered a left unilateral tear of the cervix extending to the body of the uterus. From this and the attendant sub-involution of the uterus, she suffered much distress in the pelvic region. The convulsions came on from six weeks to six months apart, with always a number - 3 or 4 - very close together.

A year after this last confinement she underwent operation for the repair of the lacerated cervix, and from it there was some relief from the pelvic distress, but the seizures continued with increasing frequency and perhaps less severity than at first, at least many were lighter.

From this time on she was under the care of several physicians both homoeopathic and old school, with no improvement in health except perhaps less trouble in the pelvic organs. Mentally her condition has been growing worse and the seizures more frequent.

These convulsions come on suddenly and present no premonition at all, although at first she had slight feeling of dread, and occasionally would see herself as dead.

The attacks vary from a momentary unconsciousness to severe attacks resembling an epileptic seizure with dullness and sleepiness for a variable time afterwards. In the beginning the violent seizures came on in the night; the later, lighter and more frequent ones come on in the day time, mostly. It may be she also had lighter attacks at first, but coming at night were not severe enough to attract attention to them.

In their relation to the generative organs they have usually commenced with the menses, continued at intervals for about two weeks, leaving the balance of the period nearly free from attacks. Usually there would be but one convulsion in any twenty-four hours, but lately there had been occasional seizures twice daily, and the day before calling me in she had three in the twenty-four hours. Memory is not as good as formerly and there is evidently some mental

impairment. After the attacks everything is mixed up, can not gather her thoughts quickly, has no recollection of the seizure.

Appetite is good and bowels are normal. Urine slightly acid, sp. gr. 1.006, quan. 36 oz. in 24 hrs., no albumen, urea 148 grs. I would mention here that about a year previous to this I saw a test of her urine and it then showed only 1.006 sp. gravity.

Physical examination reveals a relaxed perineum, cervix and uterus very much enlarged, showing scar of former operation, the repair on outside is perfect, but in the canal there is some ulceration at the side of scar, which was very sensitive and bled easily. Ovaries apparently normal, cavity of uterus measures $3\frac{3}{4}$ in length; uterus is retroverted and slightly retroflexed, axis of cervical canal in line with axis of outlet of vagina. Uterus movable and easily replaced, but immediately returns to its old position.

I at once put her on *Oenanthe crocata* 2x dil., gtt. 5, four times daily. I must confess from no special indications except the similarity of convulsions, from the clinical cases reported, and because no other drug seemed better indicated. On Nov. 28, 1894 the urine showed a sp. gr. of 1.008; since which time I have made no examination of it until within a few days when it showed 1.010 sp. gr.

On Dec. 12, '94 one week after appearance of menses she had a convulsion, of which I saw the winding up, and it so closely resembled a genuine epileptic convulsion that had I not known of its relation to menstruation and the low specific gravity of the urine, which is considered pathognomonic of hystero-epilepsy, I should have diagnosed the case as epilepsy. This convulsion was probably induced by indiscretion in both diet and exercise which she took that day.

On Dec. 19th I commenced local treatment for the relief of the pelvic condition and as soon as seemed advisable fitted an Albert Smith retroversion pessary, which completely relieved the remaining pelvic distress.

I continued the *Oenanthe* four times daily for ten months with constant improvement in health, only one convulsion and that less than a month after treatment, and none from Dec. 12, 1894 to this time - 17 months, and in every respect marked improvement, especially in mental condition.

If another remedy seemed indicated for any special trouble I gave it in connection with the *Oenanthe*. This may not be pure homoeopathy but I have often done this in chronic diseases and with apparently good results."

(*Oenanthe crocata*, by Joseph S. Garrison, M.D., Easton, The Southern Journal of Homoeopathy vol. 14 (1896-1897) p. 137-139)

1896 - Epileptic attacks in a man who was wounded by a piece of shell striking his forehead at the battle of Gettysburg - J. S. Cooper

"Sometime about the year 1887, I believe, shortly after moving to this city, I met one, Rev. H. B. Seely, who, while serving as aid to one of the Federal generals at the battle of Gettysburg, was wounded by a piece of shell striking him on the forehead and knocking him from his horse. He fell into the hands of the enemy and laid in prison for twenty months. Coming out of there a wreck, he began to have light attacks of epilepsy, which increased, until when I met him he was a total wreck. Was having his "spells", as he called them, as often as four or five a day, could not write his name, and at times would take to his heels and run four or five miles into to the country before he could be overtaken and captured. He had been treated by about thirty of the ablest surgeons in the country, including Gross and Agnew of Philadelphia, without the slightest improvement. I proposed to furnish him medicine if he would take it, as I believed I could cure him. He agreed, and I put him on *Oenanthe crocata*, 4th dilution, five

drops every four hours. After the first dose he had a very bad fit. I told him that it was an evidence that the medicine was acting properly. I let the dose off a little and he began to improve, and in less than a year he was enjoying perfect health; he did not take the medicine continuously, but when he felt nervous he would take a few doses. The case was a very bad one of over twenty-five years' standing, and I think the medicine wrought a wonderful cure." (J. S. Cooper, M.D., Chillicothe, Mo., Epilepsy of twenty-five years' standing cured by *Oenanthe crocata*, The Homoeopathic Recorder vol. 11 (1896), p. 354)

Klinische Hinweise / Clinical Hints



Übersicht

- 1875 - Cough in a consumptive woman - E. W. Berridge
1877 - Convulsions in a woman of twenty-six years in the seventh month of her first pregnancy - F. G. Oehme
1877 - A child of twenty months was suddenly seized with convulsions - F. G. Oehme
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1900 - Falling sickness in a teamster aged 60 years since he was injured in a fight - W. K. Fowler
1900 - Epileptic seizures in a man 29 years old, who was dealt a severe stroke with a sledgehammer on the frontal bone - W. B. Carpenter
1902 - Epileptiform seizures in a young woman who had never menstruated - McLellan
1929 - Epileptiform convulsions in women where the menstruation at the allotted time is absent - N. M. Choudhuri

1875 - Cough in a consumptive woman - E. W. Berridge

"Miss -, aged 36. May 2. Has had cough for five days, worse at night, excited by tickling at top of throat. During cough, rattling in lower chest. Sputa thick, *heavy*, white and yellow, adheres to vessel, a little *frothy*, copious. Aching pain in left side of thorax, worse on deep inspiration, relieved by pressure. She is consumptive, and subject to asthma. *Oenanthe Crocata* 200 (Leipzig) at 9 A.M., and every four hours.

3rd, 5.15 P.M. - Has had five doses; felt much better after third dose; muss less cough last night and to-day. Sputa much less, and less heavy. Pain in side better. Under right clavicle is bronchial breathing, increased vocal resonance, and dullness on percussion. Continue medicine.

5th. - Slept better. Cough less. Sputa less. Pain in side gone. Stronger. Continue medicine.

24th. All symptoms (except the physical symptoms of chest) gone for 14 days."

(E. W. Berridge, M.D., Clinical Cases, The New England Medical Gazette vol. 10 (1875), Case 4, p. 389)

1877 - Convulsions in a woman of twenty-six years in the seventh month of her first pregnancy - F. G. Oehme

"A robust, always healthy lady of twenty-six years, in the seventh month of her first pregnancy, complained on the 4th November, 1875, that she had had for some time headache and swollen feet. I prescribed *Apis* ² every three hours, one dose. The next night I was called, as she had had a singular attack, attended by unconsciousness, of which her husband could not give a good description. As I suspected convulsions, I gave *Ignatia* ² every two hours. On the next day I made further inquiry, and prescribed *Belladonna* ². The following night I was called again, she having suffered a similar, but worse attack than the preceding night. As it appeared while asleep, I gave *Opium* ² every hour. Scarcely had I reached home before I was again summoned, there having been another still worse attack. Soon after my arrival, there were two more attacks in quick succession, during which I observed the following symptoms: entire unconsciousness; eyes half closed and set; face and neck dark red and swollen; foam about the mouth; jaws tightly closed; working of the muscles of the face and neck; in the throat a singular noise, something like that when being choked; upper and lower extremities a little flexed; hands tightly closed; the whole body in a shaking, convulsive motion. The affection resembled epilepsy so strikingly that I asked at once if she was subject to this malady, which was answered in the negative. I gave *Oenanthe crocata* ³, 1 dr. every ten minutes, and since this time she has had no more attacks.

In order to appreciate fully the effect of this medicine, I must add the remainder of her history. The 18th November, twelve days after the first administration of *Oenanthe*, the anasarca had increased so enormously, from the feet up to the navel, that she could neither sit nor lie; only a half-inclined position was possible. The labia majora were so much swollen, that she could urinate only with the greatest difficulty; they were, besides, covered with several blisters from

one to one and one half inches in length. I scarified several places to let out the water. The urine contained an enormous quantity of albumen. On the 22d November she was taken with labor pains, and delivered within a few hours, passing an immense quantity of liquor amnii. The child came about seven weeks too soon, was very lean and weak, and lived only three days. After the expulsion of the after-birth, the abdomen of the mother was still as large, as if containing another child. An examination revealed considerable ascites. The birth itself was as natural as general, but she complained much of severe headache before, during, and after it, and of such a blindness that she could not see my hand at a yard distant. She only saw the outlines of objects, and at a distance of about twenty feet nothing at all. The pain was all over the head and deep inside, also in the eyes; it was at times worse, at others better; but even, when at the best, there was an indescribable strange feeling present; all she could say was, "It does not feel right, - kind of confused."

Before her pregnancy her eyesight was uncommonly good, as she could read at a great distance.

I gave her frequently, especially during the birth, *Oenanthe crocata*, and am convinced that this prevented the reappearance of the convulsions, although the albuminuria and dropsy continued, and even increased during her pregnancy, notwithstanding I used *Apis*, *Ars.*, *Hep.*, etc.

After the birth all symptoms steadily improved, and just one month later she came to my office for the first time. The dropsical symptoms and albuminuria had disappeared, but there was still much pain in the head and eyes, considerable indistinctness of vision, and asthenopia; she could, however, do some housework. Two months later, she broke off treatment, considerably improved.

I did not see anything of her for the next six months, till the middle of last August, when I advised her to consult T. F. Allen, of New York City. He examined her eyes, diagnosed retinitis albuminurica, and sent her back to me. She then took for two months *Cimicifuga* and *Hep.*, which made her eyesight as good as the general average.

In March, 1877, I was called to her to prescribe for a disordered stomach. With this exception she has been as well as ever, - no headache, and the eyes good and strong. She has not regained her extraordinary acute sight, but to compensate for this loss, she has not had a fainting fit since her disease, while formerly she had them often and on the slightest provocation."

(F. G. Oehme, M.D., Staten Island, N. Y., *Oenanthe crocata* in puerperal convulsions, The New England Medical Gazette vol. 12 (1877), p. 252-254)

1877 - A child of twenty months was suddenly seized with convulsions - F. G. Oehme

"A few weeks ago I was called to a child of twenty months, who in apparent health was suddenly seized with convulsions. There was a faint eruption, like measles, on the body, which however soon disappeared. There was a continued working of the muscles and trembling motion of the limbs, frothing at the mouth, and rolling of the half-closed eyes; swallowing very difficult. The attack lasted two and one half hours. *Bell*, and *Zinc*. ineffectual. After *Oenanthe crocata*, every five minutes, one half spoonful, quick improvement and recovery from the convulsions; three hours after the commencement of the disease, violent fever. The next day the child was well, except great weakness. No eruption.

Oenanthe crocata is a great remedy in convulsions of an epileptic form, therefore I would like to draw the attention of physicians to its value."

(F. G. Oehme, M.D., Staten Island, N. Y., *Oenanthe crocata* in puerperal convulsions, The New England Medical Gazette vol. 12 (1877), p. 254-255)

1877 - Beneficial effects in epilepsy - F. G. Oehme

"A childless, stout, healthy-looking lady of thirty-six years, whose father, one sister, and cousin were epileptic, miscarried seven times during the first years of her marriage, and suffered from several diseases of the sexual organs. At one time the menstruation did not appear, and very irritating injections were administered to force it, but the consequences were inflammation of the womb and an epileptic fit, and soon after insanity, - melancholia, with hallucinations of the ear and attempts at suicide, with entire suppression of the menses.

Up to this time she had been treated by sixteen allopathic celebrities in America and Europe, who had not spared drugs internally and externally. As the disease of the mind continued to grow worse, she was put under homoeopathic care, and was cured of it in about one year; the menses reappeared, but also the fits. They showed few characteristic symptoms, appeared from one to three times shortly before or during the menstruation, while asleep or awake, and commenced with a peculiar outcry; afterwards she would fall into a very deep sleep of several hours' duration, or was for several hours out of her senses, and talked much and incoherently. There frequently followed cramp-like pains in the lower part of the bowels (womb) and vicinity. She had no aura epileptica, but redness and a heavy expression of the face, and something inexpressible in her manners indicated the approach of the fits. The menses a little too scant and not of sufficient duration.

After she had suffered from epilepsy two years, she was put under my care, and I was her nineteenth physician. I consulted, in the course of the treatment, several distinguished physicians, and devoted a great deal of study and attention to the case, but all of no avail. Many apparently indicated remedies, high and low, were administered during one and a half years, but without any decided result, although now and then there seemed to be a transient improvement ; treatment was therefore discontinued.

About a year later, in spring 1875, I happened to read several cases of poisoning with *Oenanthe crocata*, the same which Hale quotes in his fourth edition, and I recalled at once my old patient. She accepted the offer to try this remedy, and took alternately the third, sixth, and thirtieth dilution, once or twice a day one drop, tolerably regularly from the 15th July, 1875, till 15th January, 1876. Until the commencement of December, 1875, she had her attacks regularly every month, but after that they did not appear for one whole year. She felt better generally, the menses were more in quantity and lasted longer, and she lost in weight, greatly to her delight (as she had begun to grow fat); but her hands and arms still retained the singular-looking marbled or rather spotted appearance, as if from bad circulation. The left ovary was also still sensitive to touch as formerly. As in the commencement of December, 1876, she again had an epileptic attack, she resumed taking the medicine in the third dilution once or twice a day. In the beginning of January, 1877, she had none. As this dilution now produced *sudden, short-lasting, but very disagreeable attacks of choking with great anguish*, which came mostly in sleep and towards morning, I gave the thirtieth dilution. Now the choking ceased, but in February an epileptic attack appeared. I ordered the tenth dilution. No attack of epilepsy in March. She grew very irregular and neglectful about taking the medicine, and an epileptic fit the first week of April was the consequence. I prescribed 23rd April *Oenanthe* 8th. No attack of choking or epilepsy so far (beginning of June).

A young girl of fourteen years, with hereditary epilepsy, was quickly benefited by *Oenan.*, but the treatment was interrupted by removal. The attacks came in sleep and while awake. No aura epileptica. I saw her in one attack, but could observe no particularly characteristic symptom. She is a blooming, healthy-looking girl, formerly very amiable, now very irritable. Although the second case does not present a cure, the remedy had such a decided influence upon this hereditary affection as no previous drug, and performed such a remarkable cure in

the first case, that it strongly calls our attention in cases of epileptic-like convulsions."
(F. G. Oehme, M.D., Staten Island, N. Y., Clinical Observations, 2. and 3. *Oenanthe crocata* in Epilepsy, The New England Medical Gazette vol. 12 (1877), p. 311-313)

1900 - Falling sickness in a teamster aged 60 years since he was injured in a fight - W. K. Fowler

"Teamster, aet. sixty. History: Nineteen years ago last Christmas got into a fight, had three ribs broken, and was struck in stomach with butt of gun. Five weeks after had pneumonia on same side, after which developed so-called falling sickness, which has continued off and on most of the time. Before attacks pain in stomach, going through to spine; pain also in the second cervical vertebra. Attacks brought on from worry and becoming very tired. Several attacks after day's work was finished. *Oenanthe crocata* on discs, four discs every three hours, continued for two months; and has now been nearly four months without an attack, until this week he had only one slight one after a hard day's work. has not taken any medicine for three months."

(W. K. Fowler, M.D, Bluffton, Ind., An *Oenanthe crocata* case, The American Homoeopathist vol. 26 (1900), p. 26)

1900 - Epileptic seizures in a man 29 years old, who was dealt a severe stroke with a sledge hammer on the frontal bone - W. B. Carpenter

"F. M., aet. 29, with no untoward family tendencies. Mechanic. Had meningitis at three years of age. No other special disease since that except some unusual trouble following vaccination. In 1894 he was dealt a severe, accidental stroke with a sledge hammer, the stroke being near the lower part of the frontal bone immediately over the nose. His first convulsive attack was in 1896 (October). It came on at night during sleep, and was only noticed by his wife: - it seemed to be a shuddering or stiffening of the body, with turning of the head, gritting of the teeth and groaning. In the morning the patient noticed a heavy, dull feeling in the head and a sensation as though the whole body was weighted down. He has regular employment at light work. The attacks came often, but always at night and were only known to the patient in the morning by the feelings just stated; they increased in severity and after a couple of years began to come by day, but in all his experience the attack has only come three or four times when he was away from home. When he was awake the aura would come in sufficient time to get to a safe place. This aura was a ringing sound as of distant bells, then a buzzing as of bees, increasing in force till he fell unconscious, which condition would last from ten to sixty minutes. One strange symptom existed for months - i.e., on looking slightly upward it would seem as though a film shower of black rods and rings would come from above and disappear when they reached the level of the eyes. Attacks come on from one to four weeks apart. He then took bromides with the effect of securing a cessation of seizures for seven months; but they then returned in spite of continued medication. After this history he came into my hands, with the following additional symptoms: twitching of individual muscles during an attack, with frothy mucus from the mouth; dullness in the head; haziness before the eyes; burning distress in the throat; obstinate constipation; chilly feelings over the body; general languor and heaviness of mind and body.

Oenanthe crocata has wrought a complete change in the last few months, in brightening the mind, energizing the body and stopping the seizures for several moons. While I know full well that there is plenty of time for a relapse, this condition is so different from the previous history that we are warranted in hoping and expecting a continuance of the improvement. The *Oenanthe* was used in the 4x and 6x."

(W. B. Carpenter, M.D., Columbus, Ohio, Epilepsy: Clinical Cases, The Medical Century vol. 8 (1900), Case II, p. 65-66)

1902 - Epileptiform seizures in a young woman who had never menstruated - McLellan

"Dr. McLellan, of New Jersey, tells me of a case of his in which a young woman, 19, of a very healthy family, who had never menstruated, had become almost idiotic in consequence, and at the periods when the menses should have come on there were epileptiform seizures of minor intensity. The state of mind was such that, after taking the best advice in Paris and the States without avail, the patient was about to be put away. *Oenanthe crocata* was given, and the next period passed without any epileptic symptoms. But there was no sign of the flow. *Belladonna* was now given, and at the next period the flow came on, and the patient's mind was entirely restored."

(John Henry Clarke, *A Dictionary of Practical Materia Medica*, vol. 2 (1902), *Oenanthe crocata*, p. 636)

1929 - Epileptiform convulsions in women where the menstruation at the allotted time is absent - N. M. Choudhuri

"Most of the cases in which I have used it with success are those occurring in women mostly about the menstrual time and where absence of menstruation at the allotted time leads to priapism and subsequently epileptiform convulsions."

(N. M. Choudhuri, *A Study on Materia Medica*, Second Edition 1929, *Oenanthe crocata*, p. 744)

Hering's Guiding Symptoms



Constantin Hering (1800-1880)

1889 - Constantin Hering

(Constantin Hering, The Guiding Symptoms of our Materia Medica, vol. 8 (1889),
Oenanthe crocata p. 182-187)

Drop-Water; Water Hemlock.

Umbelliferae.

A plant indigenous to England, Sweden, France and Spain; grows in moist places and swamps.

The alcoholic tincture is prepared from the fresh root.

It is mentioned by Hahnemann in a letter to Stapf in 1813.

So far we have had no provings, only toxicological reports, which are numerous.

See Allen's Encyclopedia, vol. 7, p. 128.

Clinical Authorities.

Cough, Berridge, N. E. M. G., vol. 10, p. 389; *Spasms caused by puerperal albuminuria*, Oehme, Hah. Mo., vol. 12, p. 644; *Convulsions*, Oehme, N. E. M. G., vol. 12, p. 254; *Epilepsy*, Oehme, N. E. M. G., vol. 12, p. 311; Hansen, A. H. Z., vol. 113., p. 69; Hendricks, A. H. Z., vol. 109, p. 7;
3 Cases greatly improved, Horner, Trans. Hom. Med. Soc., Pa., 1886, p. 102, Martin, MSS., Knerr, MSS.

Mind

Sudden and complete loss of consciousness.

Disturbances of intellect; mad and furious, as if drunk.

Extreme restlessness approaching to mania.

I Furious delirium; hallucinations.

ii Delirium like delirium tremens; constantly moved from place to place, talked without cessation and without knowing what they said; grasped at imaginary objects.

ii Epileptic insanity; sudden furious attack.

Sensorium

ii Apoplectic conditions; speechless and insensible, face puffed and livid, pupils dilated, respiration laborious, limbs contracted, tenesmus.

Vertigo : with falling; with nausea, vomiting, syncope and convulsions.

I Suddenly falls down backward.

Inner Head

Pain all over, but particularly in his head.

Momentary sensation of pungent heat determining to head.

Hyperaemia of brain; extravasation and serous exudation.

Sight and Eyes

Disturbance of vision.

Eyes turned upward.

ii Pupils first contracted then dilated.

Eyes are fixed and look red.

Smell and Nose

Bleeding from nose.

Upper Face

I Rapid, convulsive twitchings of muscles of face.

ii Risus sardonicus.

I Face ghastly, livid and turgid.

Face swollen and livid, with bloody froth issuing from mouth and nostrils.

Rose-colored spots on face.

Lower Face

I Muscles of mastication in rigid spasm; trismus.

Teeth and Gums

Convulsive movements of teeth.

Taste and Tongue

Loss of speech.

Tongue : protruding; swollen; bitter; clean, moist and trembling.

Inner Mouth

Excoriation; inflammation; blisters.

Foaming at mouth; bloody mucus. θ Epilepsy.

Throat

Angina; burning heat in pharynx; throat very painful.

Pressure on throat gives pain; it is sore when he swallows.

Appetite, Thirst. Desires, Aversions

Total loss of appetite, with debility.

Desires cold drinks.

Hiccough, Belching, Nausea and Vomiting

Great retching to vomit; vomiting during fit; vomiting of blood.

ii Obstinate vomiting, continuing for days, not relieved by anything.

Scrobiculum and Stomach

ii Burning heat in throat and stomach, with disturbance of intellect; vertigo, cardialgia, nausea, followed by alvine evacuations.

Abdomen

Gripping and severe tormina.

Gastro-enteritis, with violent pain and vomiting.

Abdomen tympanitic; swells with the convulsions.

Male Sexual Organs

Semipriapism.

Respiration

Breathing : stertorous; spasmodic; convulsive; heavy; short; slow; laborious; loud tracheal rales; hardly perceptible; sudden cessation, followed by a catching sigh; spasm of diaphragm.

Cough

I Cough for four or five days, agg at night, excited by tickling at top of throat; during cough rattling in lower chest; sputa thick, heavy, white and yellow, adheres to vessel, a little frothy,

copious; aching pain in left side of thorax, agg from deep inspiration, amel from deep pressure.

Expectoration : reddish; bloody; white; frothy.

Inner Chest and Lungs

Lungs hyperaemic; hepatized in spots.

Pleuritic exudation.

Heart, Pulse and Circulation

Pain in heart.

Pulse : very feeble, heart's action scarcely perceptible; accelerated before the fit.

Neck and Back

Pain along spinal column.

Intense action of dorsal and lumbar muscles; opisthotonos.

Upper Limbs

Arms flexed at elbow in a right angle.

Rapid convulsive twitchings of muscles of hands.

Hands are clenched during tetanus.

Irritation of arms and hands, with sharp lancinating pains.

Lower Limbs

Pain along track of sciatic and crural nerves, commencing in spinal column, more especially lumbar region.

Cramps in calves.

Legs stretched straight out.

Limbs in General

Numbness and feebleness of limbs.

Rest. Position. Motion

Legs stretched straight out.

Body rigid during convulsions.

Whole body in shaking, convulsive motion.

Falling : from vertigo; in convulsions.

Swallowing : causes soreness of throat.

Nerves

Violent convulsions, with trismus or tetanus; risus sardonicus; body rigid; rigors; jactation.

ii Terrible convulsions, followed by coma or deep sleep.

I He fell back foaming at mouth and black in face.

Gave a leap and then fell.

ii Sudden convulsions, trismus, biting of tongue, followed by unconsciousness and oblivion of circumstances.

Convulsions, with deathly syncope, coldness as if dead.

Convulsions, with swollen, livid face; bloody froth from nose and mouth; convulsive respirations, insensibility, feeble pulse.

ii Child, aet. 22 months, suddenly seized with convulsions; faint eruption like measles on body, which, however, soon disappeared; continued working of muscles and motion of limbs; frothing of mouth and rolling of half-closed eyes; swallowing very difficult; attack two and

one-half hours (Bellad. and Zinc. ineffectual). After Oenanthe croc. rapid improvement and recovery; three hours after commencement of disease, violent fever; next day child quite well, except great weakness; no eruption.

ii Spasms in quick succession, with entire unconsciousness, eyes half closed and set; face and neck dark red and swollen; foam about mouth; jaws and hands tightly closed; singular noise in throat, as if being choked; upper and lower extremities slightly curved; whole body in a shaking, convulsive motion; during seventh month of pregnancy in a woman with albuminuria, dropsy, headache, etc.

I Utters loud cries and falls to the floor, then loss of consciousness, clonic spasms of limbs, frothing at mouth, rolling of eyes, clenched thumbs, alternate redness and paleness of face and involuntary escape of stool and urine; no aura; attacks often three or four times a week, at times every two weeks, after attack, sleep of five or six hours duration, heaviness in head, lassitude and prostration; memory somewhat impaired; Bellad., Cuprum, Ignat. and Pulsat. gave no relief except that spasms occurred less frequently, but they were still as severe and were accompanied by convulsive motions of face, which became lead-colored and swollen during attack.

ii Epilepsy in a girl, aet. 16; first attacks appeared when 9 years old; convulsions, salivation and complete loss of consciousness during attack; several attacks in twenty-four hours; after using bromide of potash for a year attacks ceased until her twelfth year, when menstruation was established; attacks occur day or night; menses very irregular, often absent several months; great weakness; face icteric; expression stupid.

ii One to three epileptic fits shortly before and during menses, appear while asleep and awake, and commence with a peculiar outcry, afterwards would fall into a very deep sleep of several hours duration, or was for several hours out of her senses and talked much and incoherently; there frequently followed cramp-like pains in lower part of bowels (womb) and vicinity; she had no aura epileptica, but redness and a heavy expression of face, and something inexpressible in her manner indicated an approaching attack; menses a little too scant and not of sufficient duration.

ii Has two kinds of fits; one her companions call a "funny spell" and comes on very suddenly; she will jump up and turn over the washstand or chair; once she started towards the stove, and a number of times has torn her clothes or cut the buttons off her dress; if any one interferes she will fight or become very violent; will continue in this condition fifteen minutes or more and then recover her senses and normal condition as quickly as she lost them; knows nothing of what has occurred; in the other kind she will suddenly shriek, throw up her hands and fall back unconscious, frothing at mouth, eyeballs turned up, and limbs and whole body violently jerking and twitching; this will continue a few minutes and then she will gradually recover; very weak after such a spell, but not so after one of the former kind; attacks almost daily, and each one worse than its predecessor; attacks agg while menstruating; uterus undoubtedly the origin of the trouble. (Has had but ten attacks during the three months she has been taking Oenanthe croc.)

Time

Night : cough agg.

Temperature and Weather

Cold drinks : desire for.

Attacks, Periodicity

Two and one-half hours : convulsions.

Alternate : redness and paleness of face.

Three or four times a week, every two weeks : spasms.

Day or night : attacks of epilepsy.
Before and during menses : one to two epileptic fits.

Locality and Direction

Left : pain in side of thorax.

Sensations

Cold as if dead during convulsion, noise in throat as if being choked.

Pain : all over, but particularly in head; in throat; in heart; along spinal column; along track of sciatic and crural nerves.

Violent pain : in stomach.

Sharp, lancinating : in arms and hands.

Aching pain : in left side of thorax.

Cramps : in calves.

Cramplike pains : in lower part of bowels.

Burning heat : in pharynx; in throat and stomach.

Heat : determining to head.

Heaviness : in head.

Tickling : at top of throat.

Numbness : of limbs.

Touch, Passive Motion, Injuries

Pressure : on throat painful; deep pain in thorax amel.

Skin

Rose-colored on face, chest, arms and abdomen.

Stages of Life, Constitution

Child, aet. 20 months, apparently in good health; convulsions.

A young girl, aet. 14, with hereditary epilepsy, was quickly benefited; attacks came in sleep and while awake; no aura.

Girl, aet. 14, well built, not yet menstruating; epilepsy.

Girl, aet. 16, father drunkard, suffering since ninth year; epilepsy.

Woman, aet., 26, primipara, suffering with albuminuria, dropsy, headache, etc., during seventh month of pregnancy; spasms.

Miss, aet. 36, consumptive and subject to asthma.

Woman, aet. 36, childless, stout, healthy looking, of epileptic family, miscarried several times during first year of marriage, and suffered diseases of sexual organs; at one time menstruation did not appear, and very irritating injections were used, but the consequences were metritis and an epileptic fit and soon after insanity; under homoeopathic treatment the disease of mind was cured and menses returned; epilepsy.

Woman, aet. 37, married, says she suffered from chorea from seventh year until appearance of menses, then commenced the epileptiform attacks; epilepsy.

Relations

Compare : Cicuta.

Leitsymptome und Charakteristika / Keynotes and Characteristics



Übersicht

1902 - John H. Clarke
1915 - Cyrus M. Boger
1927 - William Boericke

1902 - John H. Clarke

Characteristics. - *Oenanthe crocata* is one of the most poisonous of the Umbelliferae, and many accidents have happened from the use of the root in mistake for parsnips, and of the leaves in salads and soups. These have furnished the symptoms of the pathogenesis. Some of them are given in C. D. P.

A man, 40, when fasting, ate the root. He soon complained of great heat in throat; half an hour after became speechless, fell down unconscious, and was seized with terrible convulsions, which lasted three-quarters of an hour and ended in death. It was impossible to give medicine on account of the jaws being closed by trismus the whole time. Post-mortem examination of those who have died of this poisoning reveal

- (1) Extreme post-mortem rigidity.
- (2) Hands strongly clenched with thumb applied forcibly to palm.
- (3) Purple surface; nails blue.
- (4) Black fluid blood effused under scalp; veins of pia mater distended; brain substance strongly injected; sinuses distended; escape of blood beneath pia mater covering both hemispheres.
- (5) Sheath of spinal cord strongly congested.
- (6) Respiratory mucous membranes deep red, covered with frothy mucus; lungs dull, blackish with extravasations.
- (7) Heart contained black fluid blood.
- (8) Alimentary mucous membrane injected, with points of extravasation.

Two striking cases are reported in Brit. Med. Jour., March 3, 1900 (H. W., xxxv. 277), which illustrate the epileptic suddenness of the drug's action:

- (1) J. M., without any previous warning, fell down in a fit in the dining-hall as he was finishing dinner. The fit was regarded as epileptic. He regained consciousness soon after. Whilst being removed from the dining-hall to the ward he had a second severe fit with vomiting; face livid, pupils dilated and fixed; conjunctivae insensible; bloody foam about mouth and nostrils; breathing stertorous; complete insensibility. Six severe fits followed with an interval of a few seconds between. The convulsion was clonic and general, but attained its greatest intensity in lower limbs first; next upper limbs; lastly in face. Death took place from asphyxia, the heart continuing to beat a few seconds after respiration ceased.
- (2) T. F. was seized with a severe fit when going out to resume work on the farm after dinner. He vomited a quantity of food, and emesis was kept up by giving Ipecacuanha wine, followed by copious draughts of tepid water. There was no unconsciousness, but a marked mental change *after the convulsions*; the patient was delirious and talked incessantly to himself; drowsy and averse to be questioned. Face pale, pupils dilated, pulse weak and slow. Two hours later he recovered, and told how J. M. had given him a piece of "carrot" of which J. M. had himself eaten. T. F. took two bites of it and threw the rest away.

The sudden falling and the subsequent *status epilepticus* are well depicted in these two cases. In homoeopathic practice it has been given with much success in cases of epilepsy. With the 3x I once gave great temporary relief in a case of idiopathic tetanus, which, however, terminated fatally.

The cases of epilepsy in which it is particularly indicated are those in which there is during the fit: vomiting; tympanitis; or semi-priapism. Epilepsy arising from disorders of the sexual sphere.

Dr. McLellan, of New Jersey, tells me of a case of his in which a young woman, 19, of a very healthy family, who had never menstruated, had become almost idiotic in consequence, and at the periods when the menses should have come on there were epileptiform seizures of minor intensity.

The state of mind was such that, after taking the best advice in Paris and the States without avail, the patient was about to be put away. Oena. c. was given, and the next period passed without any epileptic symptoms. But there was no sign of the flow. Bell. was now given, and at the next period the flow came on, and the patient's mind was entirely restored.

J. S. Garrison (S. J. of H., xiv. 135) reports a case of hystero-epilepsy. Mrs. T., 32, commenced to menstruate at sixteen. At first there was no pain, but later there was. Married at twenty-three, she had two children, on eighteen months after marriage, and the other seventeen months after the first.

About the fourth month of the first pregnancy she began to be troubled with weight and pressure in pelvis and groins so that she could hardly walk. This lasted till the confinement. At the sixth month she had the first convulsion, and she had two others between that and the confinement. During the afternoon of the last three days before confinement she had a sensation as if she had been struck on the side of the head, and she fell, but without loss of consciousness. Severe headache followed.

She had no more convulsions till after the baby died at five months, when she had one. But three months later she became pregnant again and convulsions recommenced, continuing at irregular intervals till confinement, when they ceased till she began to move about. They then recurred at intervals, varying from six weeks to six months, and when they did come there were always three or four very close together. The mental condition grew worse all the time. The fits came suddenly without premonition; except that at first she had a slight feeling of dread, and occasionally could see herself as dead. The attacks varied from momentary unconsciousness to epileptiform seizures with dullness and sleepiness for varying times. At first they came in the night; later in the day, sometimes two in one day. They usually began with the menses. The uterus was much enlarged and the parts greatly relaxed. The urine had a very low specific gravity. Oena. c. 2x was given, five drops four times a day, on November 16, 1894. On December 12th there was a severe attack, apparently induced by errors of diet, a week after appearance of menses. The medicine was continued for ten months with constant improvement in health, and with no further convulsions.

J. S. Cooper (H. R., xi. 354) relates the case of a clergyman in attendance on one of the Federal generals at Gettysburg, who was wounded in the forehead by a fragment of shell, taken prisoner, and kept in prison twenty months. On his release he was quite a wreck, and soon began to have light epileptic seizures, which gradually got worse, and when seen by J. S. Cooper, twenty-five years later, he was having four or five fits a day, could not write his name, and at times would take to his heels and run four or five miles into the country before he could be caught. Oena. c., 4, five drops every four hours, was prescribed. After the first dose he had a very bad fit. The dose was diminished. He began to improve, and in less than a year was in perfect health. Oena. c. was not taken continuously, but when he "felt nervous" he would take a few doses.

F. H. Fish (H. R., vii. 80) cured a girl, 16, sanguine, well grown, who at eight began to have fits of absent-mindedness at irregular intervals. At twelve menstruation commenced; at fourteen epileptic seizures, having no relation to the menstrual periods. The fits were so severe that sixty to one hundred grains of Potassium bromide was required to keep them under control. Oena. c. í, five drops in six ounces of water: a teaspoonful every three hours, and later

less often. She had not another spasm, and lost her absent-mindedness and became cheerful and active.

W. K. Fowler (Amer. Hom., quoted H. W., xxxv. 212) reports this case: A teamster, 60, nineteen years before got into a fight, had three ribs broken, and was struck in stomach with butt of gun.

Two weeks later had pneumonia on the injured side, and after that epileptic seizures. Before the attacks: pain in stomach going through to spine; pain in second cervical vertebra. Attacks induced by worry and by becoming very tired. Severe attacks after day's work was finished. Oena. c. on discs, four discs every three hours for a month. After this there was only one slight attack after a hard day's work during the four months he was under observation.

W. B. Carpenter relates (Med. Cent., quoted H. W., xxxv. 369) the case of F. M., 29, of good family history, who had meningitis at age of three, and had some unusual trouble after vaccination.

In 1894 (aged 23) had a severe accidental blow with a sledgehammer on frontal bone immediately over nose. In 1896 had his first convulsive attack, coming on during sleep, and only noticed by his wife; a shuddering and stiffening of the body, turning of the head, grinding teeth and groaning.

In the morning patient noticed a dull, heavy feeling of the head, and sensation as if whole body weighted down. For two years the attacks occurred only at night, and were known to the patient by these feelings next day. The attacks increased in severity, and now began to come in the day, and were preceded by an aura like the sound of distant bells, then buzzing as of bees, increasing in intensity till he fell unconscious, this condition lasting from ten to sixty minutes. For months the patient had this strange symptom: On looking upward a filmy shower of black rods and risings seemed to come from above and disappear on reaching the level of his eyes. Fits recurred at intervals of one to four weeks. Bromides were then given, and there were no fits for seven months, when they no longer controlled, and he consulted Carpenter, who noted these additional symptoms : Twitching of individual muscles during attack, with frothy mucus before mouth; dullness in head, haziness before eyes : burning dryness in throat; obstinate constipation; chilly feelings over body; languor and heaviness of mind and body. Oena. c. 4x and 6x made a complete change in a few months; brightening the mind, energizing the body, and stopping the seizures for several months.

Among peculiar symptoms are: Cold as if dead during convulsions; noise in throat as if being choked. Burning. Burning heat. Numbness. Legs stretched straight out. Swallowing = soreness of throat. Pressure < pain in throat; > deep pain in thorax. All symptoms < from water (in three women poisoned by it).

Relations. - *Compare* : Phelland., Cicut. v., Con. In epilepsy, Bufo. In priapism, Pic. ac.

Causation. - Injuries.

(John Henry Clarke, A Dictionary of Practical Materia Medica, vol. 2, London 1902, Oenanthe crocata, Characteristics, p. 635-638)

1915 - Cyrus M. Boger

REGION	WORSE
CEREBRO-SPINAL AXIS	Injury. Menstrual and Sexual Disturbances
Heart	

Mania. Swelled, twitching face. Rosy red blotches on face and chest. Burning heat, < head and throat. **Epilepsy;** with priapism. Status epilepticus (Absin., Acon.). As of a bug creeping under skin about waist; < touch of clothes.

Related: Bell., Cic.

(Cyrus M. Boger, M.D., A Synoptic Key to the Materia Medica, 1st edition, 1915, *Oenanthe crocata*, p. 264)

1927 - William Boericke

Epileptiform convulsions; worse, during menstruation and pregnancy. Puerperal eclampsia; uraemic convulsions. Burning in throat and stomach, nausea and vomiting. Red spots in face. Convulsive facial twitching. Skin affections, especially lepra and ichthyosis.

Head. - Pains all over head, dizzy. Sudden and complete unconsciousness. Furious delirium, giddiness. Countenance livid, eyes fixed, pupils dilated, *convulsive twitching of facial muscles*, trismus, foaming at mouth, locked jaws. Much yawning. Tendency to cry over little things.

Respiratory. - Tickling cough, with rattling in the lower part of the chest, and thick, frothy expectoration. Heavy, spasmodic, stertorous breathing.

Extremities. - Convulsions; opisthotonos. Pain along crural and sciatic nerves, commencing in back. Cold hands and feet. Numbness of hand and foot.

Relationship. - Compare: *Cicuta*; *Kali bromatum*.

(William Boericke, M.D., Pocket Manual of Homoeopathic Materia Medica, Ninth Edition, New York 1927, *Oenanthe crocata*, p. 477-478)

Kommentare / Commentaries



Übersicht

1896 - Joseph S. Garrison

1900 - W. A. Dewey

1896 - Joseph S. Garrison

"The *Oenanthe Crocata* is a plant indigenous to England, Sweden, France and Spain, growing in moist places and swamps. It belongs to the order of umbelliferae, the same to which *aethusa*, *cicuta* and *conium*, with which we are more familiar, belong. The common names are water-hemlock, water-dropwort, water lavage, and dead-tongue. It is one of the largest plants of the hemlock family, reaching a height of from three to five feet, with large expanded root resembling a parsnip, for which it has frequently been mistaken with serious and often fatal results.

The tincture for homoeopathic use is prepared from the fresh root, at time of blooming.

Most of our information regarding this drug comes from poison cases and experiments on animals.

According to Cowperthwaite it acts powerfully upon the cerebro-spinal nervous system, producing epileptiform spasms and causing inflammation and softening of the medulla oblongata and contiguous nerve tissue.

It is the most powerful and energetic poison of its family which includes *aethusa*, *cicuta* and "*conium*, though it has been little used clinically."

From a study of its poisoning cases we are impressed with the extreme rapidity of its action, almost rivalling hydrocyanic acid in its lightning-like effects, death ensuing as early as thirty minutes after the ingestion of the poison, and occurring from that time on to as late as eleven days.

The earliest manifestations noted were the sudden syncope and convulsions, which, in most cases, were the first indications of poisoning; these convulsions so severe in many instances that from the moment of seizure until the fatal termination there was no return to consciousness. In other cases there was inability to talk, recurring convulsions with trismus and trembling; swelling of face with lividity, bloody froths from nose and mouth; stertorous and convulsive respiration. After convulsions, apoplectic state, insensible, speechless, pupils dilated, face puffed and livid, respiration laborious; limbs contracted and jaws fixed in trismus, followed by convulsions, coma in which death came, or death in a fresh convulsive fit.

In those who recovered there was in addition, furious mania, upward turning of eyes, contraction of the lower jaw; inability to know or feel anything; vomiting, lasting for days; loss of memory for events during the seizure; loss of hair and nails; heat in the throat, numbness and feebleness of limbs, severe syncope after several days.

In the U. S. Dispensatory, 15th edition, the effects of the drug are given as "those of irritation of the stomach, besides failure of the circulation and great cerebral disturbance, indicated by giddiness, convulsions and coma. Externally applied the root produces redness and irritation of the skin with an eruptive affection."

Post mortem examination shows congestion of all the surfaces of the body; especially congestion and inflammation of the medulla oblongata and cord.

Experiments on animals gave first depression and sadness, followed by convulsions especially in face and fore-legs; irregular respiration, vomiting; foetid stools and abundant urine;

trismus, also convulsions coming on again after animals seemed almost or entirely well.

Summing up we have; sudden convulsions with stertorous breathing, livid congested sallow face, frothing at the mouth with bleeding from mouth and nose, pupils dilated and eyeballs turned upward; trismus, jaws rigidly closed; tongue swollen and furred, speechless; mania which is furious; convulsions follow each other rapidly, trembling and twitching of muscles; syncope, burning in throat, violent and continued vomiting.

In the old school therapeutics the only use I can find is as an ointment for piles, and in leprosy of which it is claimed to have cured a case.

In the homoeopathic ranks its principal use seems to be as a remedy in epilepsy, for which it has been given empirically and in many cases with good results.

Prof. Charles Mohr in an article on the umbelliferae in the *Hahnemannian Monthly* for January 1896 says: "So far its use has been confined to the convulsions of children suffering from eruptive diseases; the epileptiform convulsions of pregnancy with albuminuria; and the tickling cough of bronchitis with rattling in the lower chest and expectoration of thick heavy white and yellow sticky sputa."

While the poisoning cases present a very great similarity to the typical epileptic convulsions, there seems so far to be very little data by which we can individualize its action and make selections for special cases.

As I have seen no record of its use in hystero-epilepsy I append a case which was apparently cured by *Oenanthe crocata*, at least there have been no convulsions for seventeen months. While one case does not prove it to be a specific, each case reported will help us to arrive at a better understanding of the drug's place in therapeutics, and may prove interesting.

Mrs. T., aet. 32 years, came to me on Nov. 16, 1894, with the following history :
As a child, good health; menstruation commenced at 16 and continued regularly, the period being 25 days, flow lasting from 5 to 7 days and profuse. At first there was no pain but as she grew older had some distress.

Married at 23; has had two children, the first 18 months after marriage, the second seventeen months later. About the 4th month of her first pregnancy she began to be troubled with sensation of weight and pressure in pelvis and groins so she could hardly walk, which continued up to confinement. At the sixth month she had the first convulsion, and two more between that and confinement. There was no swelling of feet nor as far as I could learn any other evidence of albuminuria. During the afternoon of each of the three days previous to confinement she had a sensation as if she had been struck on the side of the head, and fell, followed by severe headache, but no loss of consciousness; this headache continued up to the delivery of the child. She had no more convulsions until after the baby died at five months when she had a convulsion; but 3 months later she became pregnant again and at once the convulsions commenced, continuing at irregular intervals until confinement, when they ceased while she was in bed, but came on again as soon as she began to move around.

At this confinement she suffered a left unilateral tear of the cervix extending to the body of the uterus. From this and the attendant sub-involution of the uterus, she suffered much distress in the pelvic region. The convulsions came on from six weeks to six months apart, with always a number - 3 or 4 - very close together.

A year after this last confinement she underwent operation for the repair of the lacerated cervix, and from it there was some relief from the pelvic distress, but the seizures continued with increasing frequency and perhaps less severity than at first, at least many were lighter.

From this time on she was under the care of several physicians both homoeopathic and old school, with no improvement in health except perhaps less trouble in the pelvic organs. Mentally her condition has been growing worse and the seizures more frequent.

These convulsions come on suddenly and present no premonition at all, although at first she had slight feeling of dread, and occasionally would see herself as dead.

The attacks vary from a momentary unconsciousness to severe attacks resembling an epileptic seizure with dullness and sleepiness for a variable time afterwards. In the beginning the violent seizures came on in the night; the later, lighter and more frequent ones come on in the day time, mostly. It may be she also had lighter attacks at first, but coming at night were not severe enough to attract attention to them.

In their relation to the generative organs they have usually commenced with the menses, continued at intervals for about two weeks, leaving the balance of the period nearly free from attacks. Usually there would be but one convulsion in any twenty-four hours, but lately there had been occasional seizures twice daily, and the day before calling me in she had three in the twenty-four hours. Memory is not as good as formerly and there is evidently some mental impairment. After the attacks everything is mixed up, can not gather her thoughts quickly, has no recollection of the seizure.

Appetite is good and bowels are normal. Urine slightly acid, sp. gr. 1.006, quan. 36 oz. in 24 hrs., no albumen, urea 148 grs. I would mention here that about a year previous to this I saw a test of her urine and it then showed only 1.006 sp. gravity.

Physical examination reveals a relaxed perineum, cervix and uterus very much enlarged, showing scar of former operation, the repair on outside is perfect, but in the canal there is some ulceration at the side of scar, which was very sensitive and bled easily. Ovaries apparently normal, cavity of uterus measures $3\frac{3}{4}$ in length; uterus is retroverted and slightly retroflexed, axis of cervical canal in line with axis of outlet of vagina. Uterus movable and easily replaced, but immediately returns to its old position.

I at once put her on *oenanthe crocata* 2x dil., gtt. 5, four times daily. I must confess from no special indications except the similarity of convulsions, from the clinical cases reported, and because no other drug seemed better indicated. On Nov. 28, 1894 the urine showed a sp. gr. of 1.008; since which time I have made no examination of it until within a few days when it showed 1.010 sp. gr.

On Dec. 12, '94 one week after appearance of menses she had a convulsion, of which I saw the winding up, and it so closely resembled a genuine epileptic convulsion that had I not known of its relation to menstruation and the low specific gravity of the urine, which is considered pathognomonic of hystero-epilepsy, I should have diagnosed the case as epilepsy. This convulsion was probably induced by indiscretion in both diet and exercise which she took that day.

On Dec. 19th I commenced local treatment for the relief of the pelvic condition and as soon as seemed advisable fitted an Albert Smith retroversion pessary, which completely relieved the remaining pelvic distress.

I continued the *oenanthe* four times daily for ten months with constant improvement in health, only one convulsion and that less than a month after treatment, and none from Dec. 12, 1894 to this time - 17 months, and in every respect marked improvement, especially in mental condition.

If another remedy seemed indicated for any special trouble I gave it in connection with the *oenanthe*. This may not be pure homoeopathy but I have often done this in chronic diseases and with apparently good results."

(*Oenanthe crocata*, by Joseph S. Garrison, M.D., Easton, The Southern Journal of Homoeopathy vol. 14 (1896-1897) p. 135-139)

1900 - W. A. Dewey

Preparation. - The fresh root is macerated in two parts by weight of alcohol.

(The following paper on *Oenanthe crocata* was kindly sent to the editor by Dr. W. A. Dewey, of the Ann Arbor University, Michigan) :

Oenanthe crocata belongs to the large family of the Umbelliferae which furnishes us with Conium and Cicuta. It grows in marshy localities in England and France. In botanical works of the 16th and 17th centuries it was often confounded with *Cicuta virosa*, an error which has even been made in more recent times, in fact, only one botanist of the 19th century described the plant with sufficient exactness for its recognition, and that was DeLobel, who published his Botany in 1851. It is one of the largest plants of the family, being 3 to 5 feet high. Our tincture is from the fresh root.

Historical. - *Oenanthe* was known to Galen and Dioscorides, and numerous citations might be made to show that the drug was used from the earliest times in various affections, affections that nearly every drug was tried in, but it is in the "Cyanosura Materia Medica of Boecker, published in 1729," that we first find a hint as to its true action. " Those who ate much of it were taken with dark vertigos, going from one place to another, swaying, frightened, turning in a circle as Lobilus pretends to have seen."

Hahnemann, in his " Apotheker Lexicon" (Leipzig, 1793), says of the drug : "It is said that the whole plant is poisonous and causes vertigo, stupefaction, loss of force, convulsions, delirium, stiffness, insensibility, falling of the hair, and taken in large quantities will cause death."

He says further : " That, administered with great circumspection, it should prove useful in certain varieties of delirium, vertigos and cramps."

This is interesting coming from Hahnemann at the time when he had discovered the law, but had not as yet given it to the world.

Oenanthe was considered in the last century as one of the most pernicious plants of Europe, especially for cattle, who, having eaten it, can neither vomit nor digest it and they soon die in convulsions ; this from the root, however, as they eat the leaves with impunity. It is interesting to note that animals poisoned with it decompose rapidly.

Much of the following study is taken from a series of excellent papers on the drug, which have been appearing for over a year in " Le Journal Belge D'Homoeopathie," from the pen of Dr. Ch. DeMoor, of Alost, Belgium.

General Action. - From a very large collection of observations of cases of poisoning with *Oenanthe* dating from 1556 to the present time and recorded in " Allen's Encyclopedia," the " Cyclopedia of Drug Pathogenesis," and in the article of Dr. DeMoor, above mentioned, we find that *Oenanthe crocata* produces, almost invariably, convulsions of an epileptiform character and which are marked by the following symptoms:

Swollen, livid face, sometimes pale.

Frothing at mouth.

Contraction of chest and oppressed breathing.

Dilated pupils or irregular. Eyeballs turned upward.

Coldness of the extremities.

Pulse weak.

Convulsions are especially severe, at first tonic then clonic.

Locked jaws.

Trembling and twitching of muscles.

Oenanthe also produces a delirium in which the patient becomes as if drunken, there is stupefaction, obscuration of vision and fainting.

The Greek name of the plant signifies "wine flower," and so-called on account of its producing a condition similar to wine drunkenness, and there is a difference, so I have heard, between wine and other beverages in this respect. Hiccoughs are also produced by the drug.

There is also great heat in the throat and stomach and a desire to vomit and to have stool, and a great deal of weakness of the limbs and cardialgia. Like other members of the same family, as *Conium* it produces very much vertigo, this has always been present in the cases of poisoning with the plant. In a number of cases who had been poisoned by the drug the hair and nails fell out.

Homoeopathic Action and Applicability. - The uses of *Oenanthe* homoeopathically, have been taken from the reports above mentioned; the drug has never been proved, and it is doubtful if one could be found who would prove it to the convulsion-producing extremity. All the evidence in all the authorities shows clearly that the drug produces in man all the symptoms of epilepsy, and it is in that disease that clinical testimony is gradually accumulating. Accepting the theory that epilepsy is a disturbance or irritation in the cortex of the brain, it would seem that *Oenanthe crocata* which produces congestion of the pia mater, would prove a close pathological simillimum to epilepsy. Its usefulness in this disease is unmistakable and only another proof of the truth of the homoeopathic law.

Let us review briefly some of the evidence of its action :

Dr. S. H. Talcott, in the report of the Middletown Asylum, 1893, notes that *Oenanthe* possesses a marked power in epilepsy, stating that it makes the attack less frequent, less violent and improves the mental state of the patient. He prescribes it in the tincture, 1 to 6 drops daily.

In the Materia Medica Society of New York its use has been verified several times. Dr. Paige greatly benefited a case with the 3x potency.

Dr. F. H. Fisk reports the cure of a case which had lasted two years, with the tincture. This case during the last month before the doctor took it was having from 6 to 10 attacks daily.

Dr. Garrison, of Easton, Pa., reports a case of reflex uterine or hystero-epilepsy in which the 2x acted promptly.

Allen in his Hand-Book mentions the cure of three cases with the remedy.

Dr. J. Ritchie Homer reports that the remedy greatly modified the attacks in a lady who had had the disease over 20 years, and who, for the two months previous, had had a convulsion daily. He used the 3x.

Dr. J. S. Cooper, of Chillicothe, Ohio, reports the cure of a case of 25 years' standing with the 4x.

Dr. Henderson reports the cure of a case of 9 years' standing, where the patient was almost idiotic; the convulsions were relieved and the mental condition was greatly relieved and improved. In two other cases equally satisfactory results were had.

Dr. D. A. Baldwin, of Englewood, N. J., entirely controlled the convulsions in a young man of 16 with *Oenanthe*.

Dr. Ord reports a case of petit mal cured with the 3x, and in a South American homoeopathic journal a Dr. Rappaz reports the cure of a case of three years' standing with increasing

seizures with the remedy in doses ranging from the 6 to the 12.

The late Dr. W. A. Dunn reported a genuine cure of a young girl of 16 who had been epileptic for 7 years, latterly having as many as 4 or 5 attacks during a night. The remedy caused these attacks to entirely disappear. The girl commenced menstruating at 12, so the establishment of the menses had nothing to do with the cure.

Dr. Charles A. Wilson, of San Antonio, Texas, reports a number of cases cured with *Oenanthe* in the 3x dilution, and the same potency greatly lessened the number of seizures in others.

Dr. Purdon, of the University of Dublin, relates a case of epilepsy cured with this drug in 1 to 6 drop doses several times a day.

Dr. F. E. Howard, in a case which had 3 or 4 attacks a week, gave 5 drops of the tincture every two hours, which caused violent pains in the head, but complete recovery followed on reducing the dose.

Several cases of the cure of epilepsy with *Oenanthe* in alternation with *Silicea* or some other drug have been reported, but as the question, " which cured? " comes in they need not be given.

In my own practice I have had some marked results from its action and have seen it modify attacks when everything else failed. In two cases, one a boy of 13 who had had the disease 5 years and who had suffered much of many sphincter-stretching orificialists and "lots of other things," the remedy made a complete cure ; the other case was in a man of 30 who had the grand mal, the petit mal and the epileptic vertigo. *Oenanthe* removed entirely the two former conditions leaving, only the latter, and that in a very mild degree. It also greatly improved the mental condition of the patient.

I have several cases under treatment at the present time, and some of them are showing a marked effect from its use. The question of dose I believe to be an important one. I used generally the tincture in water, but latterly I have been using the third, and I believe with better effect than I ever obtained with the tincture, and I am now of the opinion that the lower dilutions, say from the 3 to the 12, will be found more efficacious than the tincture, and the higher potencies will suit certain cases. In order to prescribe the drug with accuracy provings will be necessary to develop its finer symptomatology."

(E. P. Anshutz, New, old and forgotten remedies, 1st edition, Boericke & Tafel, Philadelphia 1900, *Oenanthe crocata*, p. 242-247)

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["Jusqu'à l'année 1870, il n'existait en France ou à l'étranger aucune thèse ou travail suivi sur l'Oenanthe crocata. Un pharmacien de la Marine, M. Gayet, a traité ce sujet, mais surtout au point de la vue botanique, et n'a donné que quelques rares et courtes observations." (Bloc 1873, p. V)]

- Joseph Roques, Phytographie médicale, tome 2, Paris 1821, Oenanthe safranée, p. 77-84
[⇒ Sehr lesenswerte Gesamtdarstellung!!]

II. Vergiftungen / Poisonings

- Observation sur l'effet des racines d'oenanthe, prises comme aliment, par Mr. Charles, Annales cliniques ou recueil périodique de mémoires et observations, publiées par J.-B. Th. Baumes, tome 33, Montpellier 1814, p. 152-156

["Demandé à la hâte par un négociant de cette ville (Montpellier), il me dit que sa femme, ses enfants et lui, se portant bien, s'étaient mis à table à midi, et qu'après avoir mangé la soupe ils avaient tous éprouvé plus ou moins de bouffées de chaleur âcre qui se portait à la tête. Ils s'étaient mutuellement avertis qu'il paraissait à leur visage des taches rosacées de figures irrégulières, d'abord petites et qui, s'élargissant successivement, occupaient bientôt toute la face. Je remarquai que ces taches, qui n'excédaient pas le niveau de la peau, s'étaient répandues aussi sur la poitrine et les bras. Il ajouta que tous se plaignaient d'une ardeur mordicante à la région épigastrique, sans nausées. Lui seul avait l'abdomen tendu presque comme un ballon. D'après ce récit, confirmé presque individuellement, ne pouvant attribuer ces dérangements morbifiques subitement survenus et communs à cinq personnes qu'à une même cause à laquelle elles auraient été exposées toutes en même temps, je soupçonnai d'abord la mauvaise qualité des aliments ou leur préparation trop peu soignée. Il n'en était rien. Pour continuer mes recherches, je demandai de quelle espèce de plante ou de racine potagère on avait fait usage. On me répondit que c'était de navets, et l'on m'en apporta un paquet encore garni de feuilles. J'avoue qu'au premier coup d'œil je les jugeai comme tels, mais un examen un peu réfléchi, peut-être aussi un certain pressentiment, me firent naître des doutes. Ils furent bientôt levés par un de mes confrères, qui reconnut ces racines pour celles de l'*Oenanthe crocata*, plante, dit-il, marécageuse, âcre, mordicante et vénéneuse. Muni de ces notions et de l'avis de ce sage praticien, je pensai à enchaîner, à amortir le principe délétère qui pouvait rester encore dans les premières voies, et par les mucilagineux, les huileux et le lait surtout, garantir ces organes de l'impression qu'il pouvait y occasionner. Par un ample usage de ces remèdes, qui n'excitèrent pas la moindre nausée, les accidents disparurent dans les vingt-quatre heures. Mon confrère et moi n'oubliâmes pas une indication qui pouvait paraître trop négligée dans le cas présent : celle de procurer par le vomissement l'évacuation de la cause matérielle des accidents que nous cherchions à combattre et que nous avions à détruire ; mais j'avais sous la main le tartre stibié et les acides, et je les aurais administrés si la diminution progressive, évidente et prompte des symptômes, diminution que je devais vraisemblablement attribuer aux premiers remèdes, ne m'avait fait une loi de m'abstenir des derniers : *A juvantibus et laedentibus fit jувatio*. Un enfant de trois à quatre mois, allaité par l'épouse de ce négociant, éprouva les mêmes accidents que le reste de sa famille, mais plusieurs heures plus tard. La maladie lui avait été transmise par le lait de sa mère, le remède lui parvint par la même voie et avec le même succès qu'aux autres." - Bloc, p. 33-34]

- Notice sur l'Oenanthe crocata, par M. Godefroy, pharmacien à Paris, Journal de pharmacie et des sciences accessoires, tome 8, Paris 1822, p. 170-172

["Trois marins de l'*Argonaute*, alors en rade au port de Lorient, étaient allés se promener à terre. Un d'eux trouva quelques pieds d'*Oenanthe crocata*, et, les ayant déracinés, assura à ses compagnons que dans son pays on en mangeait habituellement les racines. Lui-même leur en donna l'exemple : ils en goûtèrent, mais en mangèrent beaucoup moins que lui. Ils ne tardèrent pas à éprouver de l'inflammation dans la bouche et le gosier. Ayant trouvé une source d'eau douce, ils en burent abondamment ; mais l'eau ayant délayé le suc de la plante, ils éprouvèrent bientôt des nausées et des spasmes. L'état dans lequel ils se trouvaient leur donnant de l'inquiétude, ils allèrent rejoindre leur canot, dans le dessein de retourner à bord. Mais l'intensité des symptômes augmentant, ainsi que les défaillances, ils furent réduits à signaler leur détresse au bâtiment, qui les envoya chercher. On les transporta à bord, où l'on administra l'émétique en premier lieu, qui réussit à faire vomir les deux matelots qui avaient mangé en moins grande quantité de la plante vénéneuse. Le premier, qui en avait le plus absorbé, fut rebelle au tartre stibié, aux antispasmodiques et à l'huile, qu'on lui administra à forte dose. Il périt après quatre heures d'angoisses inexprimables. Ses deux compagnons se trouvèrent un peu soulagés par le vomissement et furent évacués sur l'hôpital de la marine au Port-Louis, où ils furent assez longtemps malades." - Bloc, p. 35]

- Empoisonnement suivi de la mort, produit par une espèce de Jouanette ou oenanthe; par M. Bry, correspondant national à Angers, Journal général de médecine, de chirurgie et de pharmacie, tome 82, Paris 1823, p. 62-64

[M. Bry (d'Angers) a communiqué à la Société de médecine de Paris l'observation d'un empoisonnement par *Oenanthe crocata*. Un individu âgé d'environ 40 ans, puissant et d'une bonne santé, faisait un matin défricher un pré sous ses yeux. Il goûta, étant encore à jeun, une racine que les travailleurs trouvèrent en abondance en remuant la terre. A peine était-il rendu à son domicile, qu'il se plaignit d'une grande chaleur dans la gorge ; puis, une demi-heure après, il perdit la parole, tomba sans connaissance, et ensuite fut pris de convulsions terribles qui durèrent environ trois quarts d'heure et se terminèrent par la mort, sans qu'il fût possible de lui administrer aucun secours, les dents ayant été fortement serrées par le trismus, qui dura pendant tout le temps de la maladie. Le domestique de cette personne ayant goûté de cette même racine, éprouva bientôt des ampoules à la bouche. - Le cadavre, dont on ne put obtenir l'ouverture, exhalait une odeur très-fétide au bout de quinze heures. Les parties génitales étaient toutes violacées, le reste du corps n'offrait point cette couleur. Le médecin appelé auprès du malade, ayant cherché à reconnaître par la dégustation la plante ingérée, fut incommodé pendant vingt-quatre heures. Un domestique eut deux ampoules à la bouche pour avoir goûté de cette racine." - Bloc, p. 36]

• Rapport sur l'observation précédente; par. M. Mérat, Journal général de médecine, de chirurgie et de pharmacie, tome 82, Paris 1823, p. 65-74; Note additionnelle ibd. p. 300-302 [Sehr lesenswerte Übersicht über das bis zu dieser Zeit bekannte Wissen von den Wirkungen der Oenanthe. - Literaturangaben!]

- Nouvelle observation d'un empoisonnement occasionné par l'oenanthe crocata; par M. Reveillé-Parise, D.M.P., Journal général de médecine, de chirurgie et de pharmacie, tome 82, Paris 1823, p. 298-300

["Au mois d'octobre 1810, « rapporte M. Réveillé-Parise », étant à Alcaniz, dans le royaume d'Aragon, avec le régiment dont j'étais un des officiers de santé, je fus appelé avec un de mes confrères pour donner des soins à cinq soldats qui, disait on, venaient d'être empoisonnés. Comme les accidents s'étaient déclarés immédiatement après le repas, nous eûmes des soupçons. Nous examinâmes les mets avec soin, et nous prîmes des informations exactes sur toutes les circonstances de cet événement.

Nous étions cependant fort indécis sur la nature du poison avalé par les malades, lorsqu'on vint me dire que ces soldats étaient allés dans la campagne cueillir eux-mêmes la salade qu'ils avaient mangée. Heureusement que les débris n'en avaient pas encore été jetés. - Je reconnus avec assez de facilité *Oenanthe crocata*, très-commune dans certaines contrées de l'Espagne. - Les feuilles et les racines de la plante avaient été mangées. Les accidents furent ceux que l'on a décrits dans l'observation de Bry. Tous les malades éprouvèrent une chaleur brûlante à la gorge, mais deux seulement eurent des hallucinations. Regardant l'action de cette plante comme un poison stupéfiant analogue à celui de la ciguë, nous employâmes d'abord l'émétique, puis la limonade et autres boissons acidules. Bien que le traitement fût le même pour tous et administré avec promptitude, trois malades succombèrent au bout de trois à quatre heures, et les deux autres se rétablirent. - Est-ce par une disposition individuelle, est-ce parce qu'une plus petite portion de cette plante vénéneuse avait été ingérée par ces derniers ? Je l'ignore. L'ouverture des cadavres, faite avec le plus grand soin, ne fit apercevoir aucune trace d'inflammation sur la membrane muqueuse de l'estomac et des intestins.

Cette membrane était partout d'un blanc rosé qui en annonce l'état d'intégrité. On remarqua seulement de la rougeur et quelques points blanchâtres à la gorge.

Trois ans après, j'eus l'occasion de revoir les deux soldats échappés à cet accident; ils jouissaient de la santé la plus parfaite." - Bloc, p. 36-37]

• Joseph Froyssell, Surgeon, Poisoning with the Oenanthe Crocata, Letter to the Editor of The Lancet vol. 34, London 1833, vol. 1, p. 860

- Cas d'empoisonnement par les racines de panais sauvage ou *Oenanthe crocata*, observation recueillie par le Dr Unger de Tzeimesno, Gazette des Hôpitaux civils et militaires, No. 110, Sept. 1846

["La femme d'un journalier déterra, le 17 mars 1846, des racines de panais sauvage dans un jardin voisin du sien. Elle les apprêta d'une manière toute simple dans le pot de terre dont elle se servait habituellement pour la préparation de ses aliments. Cette femme mangea de ces racines au milieu de la journée, son mari et sa fille en mangèrent seulement à quatre heures de l'après-midi. - Un petit garçon et une voisine en prirent aussi, mais seulement en très-petite quantité. Dans la soirée, M. Unger fut appelé à la hâte pour donner des soins à ces

diverses personnes qu'on disait être devenues folles. En effet, il les trouva, à son arrivée, dans un état analogue à celui qui caractérise le delirium tremens. Ces malades couraient constamment d'une place à une autre, ils parlaient sans cesse et sans savoir ce qu'ils disaient ; ils voulaient prendre des objets qui n'existaient pas, et les individus qui se trouvaient là leur paraissaient être des objets dont ils s'étaient déjà servis. Le mari, âgé de 30 et quelques années, ayant mangé plus tard que sa femme, pouvait encore se montrer amiable ; mais la femme était dans un état d'agitation excessive. Elle se débattait, jurait, blasphémait, et en même temps elle était prise d'un rire convulsif. - Tous les trois étaient très-pâles, la pupille était dilatée, le regard incertain et hagard, la langue nette, humide et tremblante; le pouls, qu'on ne pouvait tâter qu'avec difficulté, en raison de l'agitation continuelle des malades, paraissait plus petit, plus faible et plus lent que de coutume. Les malades ne demandaient rien et repoussaient tout ce qu'on leur présentait; ils voulaient toujours s'échapper, de manière que plusieurs personnes étaient nécessaires pour les surveiller. La voisine, qui avait mangé moins de ces racines, se plaignait de vertige et de malaise; du reste, elle avait conservé toute sa connaissance. - Le petit garçon, qui était faible et ordinairement malingre, ne présenta non plus aucun symptôme grave. Dans ces circonstances, M. Unger prescrivit neuf doses de sulfate de zinc de 45 centigrammes chacune, et il en fit prendre une tous les quarts d'heure aux adultes. - Il n'en donna que moitié par prise à la petite fille, et par précaution il en administra un tiers au petit garçon. - Ces neuf prises, bien qu'aidées par une ingestion d'eau tiède, restèrent sans effet ; il en fut de même des autres prises de même poids. - Le petit garçon fut le seul qui vomit, et encore en petite quantité. Une troisième quantité de prises, associées cette fois à la dose égale d'ipéca, parvint enfin à faire rejeter par le vomissement une grande partie de ce qui se trouvait dans les voies digestives, et parmi ces matières un assez grand nombre de racines non digérées. Après avoir vomi, les malades revinrent à eux peu à peu. Ils se trouvaient dans une fatigue extrême et s'endormirent vers les deux heures du matin." - Bloc, p. 42-43]

- Report of the Liverpool Medical and Pathological Society, Cases of fatal Poisoning by *Oenanthe crocata*, by J. B. Nevins, M.D., Association Medical Journal 1853, p. 1069

[Four children at Liverpool ate some roots of *Oenanthe crocata* and "a handful or two of the berries of *Solanum Dulcamara*. One child died 12 hours after admission into the hospital in a state of convulsions and insensibility, the others could be saved or had only slight symptoms. The prominent symptoms in the fatal case were: "vomiting of blood; oozing of bloody mucus from the mouth; and then violent convulsions, solely affecting the flexors throughout the body; the trunk was powerfully bent forwards; the extensors were never affected." - The author states: "Several cases of poisoning by the roots of this plant, eaten by mistake for celery, are recorded in Woodville's *Medical Botany*." (...) "It appears, therefore, that convulsions are universally produced by this poison; and that a small quantity of the root suffices to cause death, which generally occurs in about twelve hours. The limitation of the convulsions to the flexors is not noticed in any of the cases recorded by Woodville; but vomiting is specially mentioned as absent in nearly every case. Now, bloody vomiting was a prominent symptom in the first fatal case which I have recorded; but it must be remembered that the child had eaten one or two handfuls of *dulcamara* berries, which frequently cause vomiting. This was, therefore, a case of mixed poisoning; and probably the vomiting was independent of the *oenanthe*. In the two cases mentioned by Woodville, in which vomiting was present, nothing is said about any other poison than the roots having been taken; but the sufferers were children. The *dulcamara* berries are ripe and tempting at the time when these cases chiefly occurred; and it is not improbable that they also might have taken these berries as well as the more deadly root."]

⇒ The symptoms of these poisonings were included in Allen's Encyclopedia of Pure Materia Medica (Authority Nr. 63). As this poisoning was a "mixed poisoning", it seems to me that the symptoms should be regarded as doubtful, unless confirmed by other cases of poisoning or clinical experiences

- Case of poisoning by *Oenanthe crocata*, by D. Nicol, M.D., Association Medical Journal 1854, p. 224, 233, 252-253

[A young woman drank a strong decoction of *Oenanthe crocata* and *Apium graveolens* for the relief of erythema and died one hour afterwards.]

- J. G. Appleton, Poisoning from *Oenanthe crocata*, The British Medical Journal 1861, vol. 1, p. 292

[Fatal poisoning of two Australian Sailors. - "They died within an quarter of an hour, after complaining of giddiness, and falling down convulsed, which was borne out by their appearances when I saw them. They had been foaming at the mouth, and their countenances were pallid."]

- Poisoning by the *Oenanthe crocata*, The Medical Times and Gazette, London 1862, vol. 2, p. 263

[An inmate of the Quimper Asylum had eaten a portion of the root. "He was brought back to the Asylum

pulseless and convulsed, and died in a few minutes." - From Archives de Mal Mentales 1861, No. 3, M. Baume.]

- Note sur L'Oenanthe safranée (*Oenanthe crocata*), par le Docteur Ad. Vincent, Premier pharmacien de la marine, au port de Brest, Archives de médecine navale, tome 1, Paris 1864, p. 88-95

["Des militaires appartenant au deuxième régiment d'infanterie de marine, les nommés C., M., D., sortirent du quartier, le 3 août 1856, pour aller se promener dans la campagne. A midi, ils arrivèrent à deux kilomètres de Brest et entrèrent dans une prairie. L'un de ces militaires, M..., crut reconnaître des plantes dont on mange dans son pays. Il s'empresse de réveiller ses camarades endormis sur l'herbe et leur fait part de sa découverte, ajoutant que ces racines sont très-estimées. C., qui a séjourné aux colonies, fait remarquer que ces racines ressemblent au manioc. M. s'empresse de nettoyer ces tubercules et en mange quatre ou cinq morceaux de 12 centimètres de longueur. Dix minutes après, il offre d'autres racines à ses amis. D..., trouvant l'odeur désagréable, en avale peu, mais C... en mange deux fragments assez volumineux. Bientôt M. se plaint de violentes douleurs à l'épigastre; la face devient immédiatement très-pâle, et il répond aux questions de ses camarades « qu'il vient d'avaler du tabac qu'il mâchait »: D. lui rappelle qu'il n'avait pas de tabac, et que ce qu'il éprouve pourrait bien être l'effet causé par la racine qu'il avait mangée. Il se plaint de violents maux de tête et de nausées fréquentes sans vomissements. Tout à coup sa vue se trouble, et il tombe en convulsions. Les deux autres soldats appellent au secours, puis, aidés par quelques personnes d'une maison voisine, ils transportent ce malheureux près d'une chaumière, où l'on essaie en vain de lui faire prendre du lait. La connaissance revint en partie deux fois, et deux fois M. fut repris de convulsions qui terminèrent la vie une heure après l'ingestion du poison. C... ressent de vives douleurs; il s'effraie, prend la course et arrive, en vomissant, jusqu'à la caserne, où le chirurgien-major du corps lui administre deux grains d'émétique qui provoquent des vomissements copieux. Cet homme entre à l'hôpital, et trois jours après il en sortait en parfaite santé. Quant à D., il n'a présenté aucun accident sérieux. Un sous-officier recueillit des morceaux assez volumineux de la racine vénéneuse, que l'on reconnut pour appartenir à l'*Oenanthe crocata*." - Bloc, p. 52-53]

⇒ Artikel enthält eine sehr lesenswerte Einführung über die Umbelliferen sowie *Oenanthe crocata*

- S. Kimball, M.D., Sackett's Harbor, N.Y., Poisoning with *Oenanthe crocata*, The American Homoeopathic Observer vol. 4 (1867), p. 79

[Death of a little boy from eating the fresh root. The Note of the Editor: "The *Oenanthe* has been regarded as a native of England, France and Spain. Is Dr. Kimball quite certain that the *Oenanthe crocata* is found at Sackett's Harbor?" seems justified.]

- H. Smiley Kane, M.D., Case of Rare Poisoning, The Medical Times and Gazette 1869, vol. 2, p. 379-380

[A very impressive and detailed report on the nearly fatal poisoning of a girl for four years of age. "She had evidently eaten at least the leaves of either *Oenanthe crocata* (hemlock dropwort) or *Aethusa cynapium* (fool's parsley), for specimens of both these plants were found growing in the locality."] ⇒ The symptoms of the case are very similar to the known symptoms of poisoning by *Oenanthe*, but can not be without doubt attributed to it. It could have been a mixed intoxication by both plants. To judge it one should compare the symptoms with the symptoms of poisonings by *Aethusa*.

• Gayet, Essai sur l'*Oenanthe crocata*, Montpellier, 1870, p. 22 ff

[(1) "M. Keraudren, ancien médecin en chef de la marine, cite dans un rapport à l'Académie royale de médecine de Paris un empoisonnement de dix-sept détenus évadés du port de Lorient. Ces malheureux, manquant de nourriture et mourant de faim, mangèrent de l'*Oenanthe crocata* qu'ils avaient trouvée dans les prairies; la ressemblance que ces racines avaient avec des raves fut cause de l'erreur. Ils ne tardèrent pas à éprouver des étourdissements, puis des nausées, des convulsions atroces, enfin une raideur tétanique qui fut suivie d'un coma profond et de la mort. Presque tous ces malheureux périrent; les autres furent sauvés par les soins qu'on leur prodigua à l'hôpital."

(2) "Il y a quelques années, quatre matelots de l'État trouvèrent des racines d'*Oenanthe crocata* à Laninon, à une demi-lieue de Brest. Ils en mangèrent tout en se promenant, ignorant la nature de ces racines, les prenant pour des racines de raifort. Trois de ces malheureux moururent quelque temps après. Le quatrième, qui en avait moins absorbé, put être sauvé, grâce aux émétiques et aux purgatifs."

(3) "Le nommé Leloup (Jules), célibataire, âgé de 23 ans, soldat d'infanterie de marine, est transporté à l'hôpital de Clermont-Tonnerre, à Brest, où je faisais, dit M. Gayet, le service comme pharmacien, le 10 avril 1868. Une heure avant son arrivée, ce malade se promenait, avec quelques-uns de ses camarades, à la campagne. Il prit dans une prairie une petite racine fusiforme, rouge à l'extérieur, blanche à l'intérieur. Après en avoir mangé, il éprouva des vertiges, des étourdissements, et, au dire de ses camarades, il tomba tout à coup à la renverse. On le

transporta alors immédiatement à l'hôpital maritime. Voici, d'après les renseignements des soldats qui l'accompagnaient, la description de la plante : Racine fusiforme, rouge à l'extérieur, blanche à l'intérieur; une même tige portant plusieurs racines, la tige ne s'élevant pas à plus de 15 à 20 centimètres à partir de sa feuille au-dessus du sol. M. Gestin, médecin-professeur, chef du service, est immédiatement porté à croire que la racine arrachée et mangée par cet homme n'est autre que *Oenanthe crocata*. Quelques instants après l'ingestion de la racine, le malade éprouva des vertiges, des nausées suivies de vomissements. A son entrée dans la salle, il offre de l'hébétude de la face, les pupilles sont contractées légèrement. Il ne répond pas aux questions qui lui sont faites et a une grande tendance au sommeil. Les extrémités sont froides ; pas de douleur sensible à la région épigastrique ni dans le reste de l'abdomen. Les nausées recommencent, mais le malade n'a pas de vomissements; le pouls est lent, irrégulier, variant entre 48 et 52 pulsations. La respiration est normale. On prescrit la potion suivante : Ipéca 1gr, 50 centigr., Emétique. 0,05. Puis un lavement avec : Séné 15 gram., S. sodique 30, Eau 500. Après l'administration de la potion, le malade répond assez bien aux questions qui lui sont faites; mais, chose remarquable! il ne se rappelle plus dans quelle circonstance il s'est trouvé, quelle racine il a mangée, etc. En somme, il a perdu la mémoire. Quand il a été réchauffé, excité par du vin chaud et une potion à la cannelle et à l'éther, il est revenu peu à peu à lui, et à 8 heures du soir il a parfaitement raconté ce qui lui était arrivé, jusqu'au moment où le vertige le prit et où il tomba à la renverse. Le lendemain, il était parfaitement rétabli; la peau était encore un peu chaude, le pouls à 80; l'hébétude de la face avait complètement disparu, le malade n'éprouvait plus de nausées. Un échantillon d'*Oenanthe crocata*, ayant été présenté au malade et à ses camarades, a été reconnu comme identique à la plante qui a causé l'empoisonnement. Du reste, les camarades du malade ont produit quelques morceaux de la racine qui avait causé l'intoxication. C'était bien encore de *Oenanthe crocata*." - Bloc p. 54-56]

• Fatal Case of Poisoning of a Man and a Horse, *The Pharmaceutical Journal and Transactions*, Third series, vol. 1 (1870-1871). p. 110

["In the August number of the *Journal of Botany* is a short notice of a rapidly fatal case of poisoning by *Oenanthe crocata*. It was mistaken for wild parsnip by a earter, who thought himself afflicted with scurvy. The man ate some of the root whilst at work, and about an hour after he fell back foaming at the mouth, and black in the face. He died before the arrival of medical aid about half an hour after the first effects, one hour and a half after the ingestion of the poison. The horse to which the man had given some of the root lived half an hour longer than the man."]

•••• P. Bloc, *Étude toxicologique et médicale sur l'Oenanthe safranée (Oenanthe crocata)*, Paris 1873

["Bonamy, dans son *Prodrome sur les plantes des environs de Nantes*, rapporte que trois hommes, en fauchant un pré, prirent des racines de cette plante et en mangèrent; deux moururent le même jour; le troisième, ayant été émétisé, rendit par le vomissement les morceaux qu'il avait avalés, mais il lui resta pendant longtemps un tremblement nerveux." - p. 56.]

• Bampton, *The Lancet* May 21, 1881, p. 823 (from Lewin)

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[Überblick über die Berichte von Vergiftungen zwischen 1900 und 1978]

- Carlton BE, Tufts E, Girard DE. Water hemlock poisoning complicated by rhabdomyolysis

and renal failure. *Clin Toxicol* 1979;14:87-92.

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• Heath KB. A fatal case of apparent water hemlock poisoning. *Yet Human Toxicol* 2001;43:35-6.

III. Homöopathie / Homoeopathy

• E. Hermel, Étude sur l'oenanthe crocata; analogie des effets avec ceux de l'épilepsie, *L'Art médical* tome 38 (1874), p. 198-209, 281-294

[Réception du travail de M. Bloc: "L'analogie des symptômes produits par la racine d'Oenanthe crocata est si grande avec les symptômes produits par l'attaque d'épilepsie et quelques-unes de ses suites, qu'elle a frappé tous les auteurs qui en ont parlé, ainsi que celui dont nous analysons l'excellent mémoire." - Observations d'empoisonnement (Bloc) - "Nous avons appris que cette étude toxicologique de M. le Dr. Bloc a été faite d'après les conseils et sous la direction de notre collaborateur, M. le Dr. Imbert-Gourbeyre. Si le jeune lauréat a cru taire la révélation le nom de son maître, c'est qu'il a pensé probablement que la révélation de l'origine homoeopathique de son travail ne lui rendrait pas favorables les archiâtres de Montpellier." - Résumé des symptômes produits par l'empoisonnement (290-293).]

•• E. W. Berridge, Pathogenetical Record. An Arrangement of the Physiological and Toxicological Effects of Drugs. Collected from Medical and General Literature. The Homoeopathic World vol. 12 (1877), Oenanthe crocata p. 131-136, 167-171, 220-222, 266-271, 308-312, 351-355

- J. Richey Horner, M.D., Allegheny City, Oenanthe crocata in Epilepsy, Transactions of the Homoeopathic Medical Society of the State of Pennsylvania, Twenty-Second Annual Session, Philadelphia 1886, p. 102-103

[Almost daily epileptic attacks in a woman aged 37. Under Oenanthe 3x, three times daily, she had in the three months of the use of it in all about ten attacks.]

••• Ch. Demoor, Oenanthe Crocata, Étude botanique et étude des effets pathogénétiques observés chez l'homme sain et chez certains animaux, *Journal Belge d'Homoeopathie* tome 3 (1896), p. 1-8, 75-81, 139-145, 199-205, 263-268, 326-333

[**Bibliographie** p. 3-7: 123 auteurs!! - Description générale - "L'Oenanthe crocata, le Phellandrium Aquaticum, La Cicutia virosa, etc. qui attirèrent surtout dans le siècle dernier l'attention des médecins, ont donné lieu à beaucoup d'observations, dont le plus grand nombre perdait énormément de leur intérêt, parce que, par la compulsion des écrits auxquels elles donnèrent lieu, on se convainquit facilement qu'ils firent une confusion complète d'espèces absolument disparates. Témoins les caractères sur lesquels ils basèrent leurs diagnoses botaniques qui ne peuvent inspirer la moindre confiance." (7-8). - **Extraits des auteurs qui ont traité de l'oenanthe** (76-81). - **Accidents et empoisonnements à la suite de l'usage de la racine** (139-145, 199-205, 263-268, 326-333: 44 observations!!]

••• Helga Lesigang, Arzneimittelprüfung von Oenanthe crocata, *Documenta Homoeopathica* Bd. 11 (1991), S. 255-265

[Bisher die einzige Arzneimittelprüfung.]