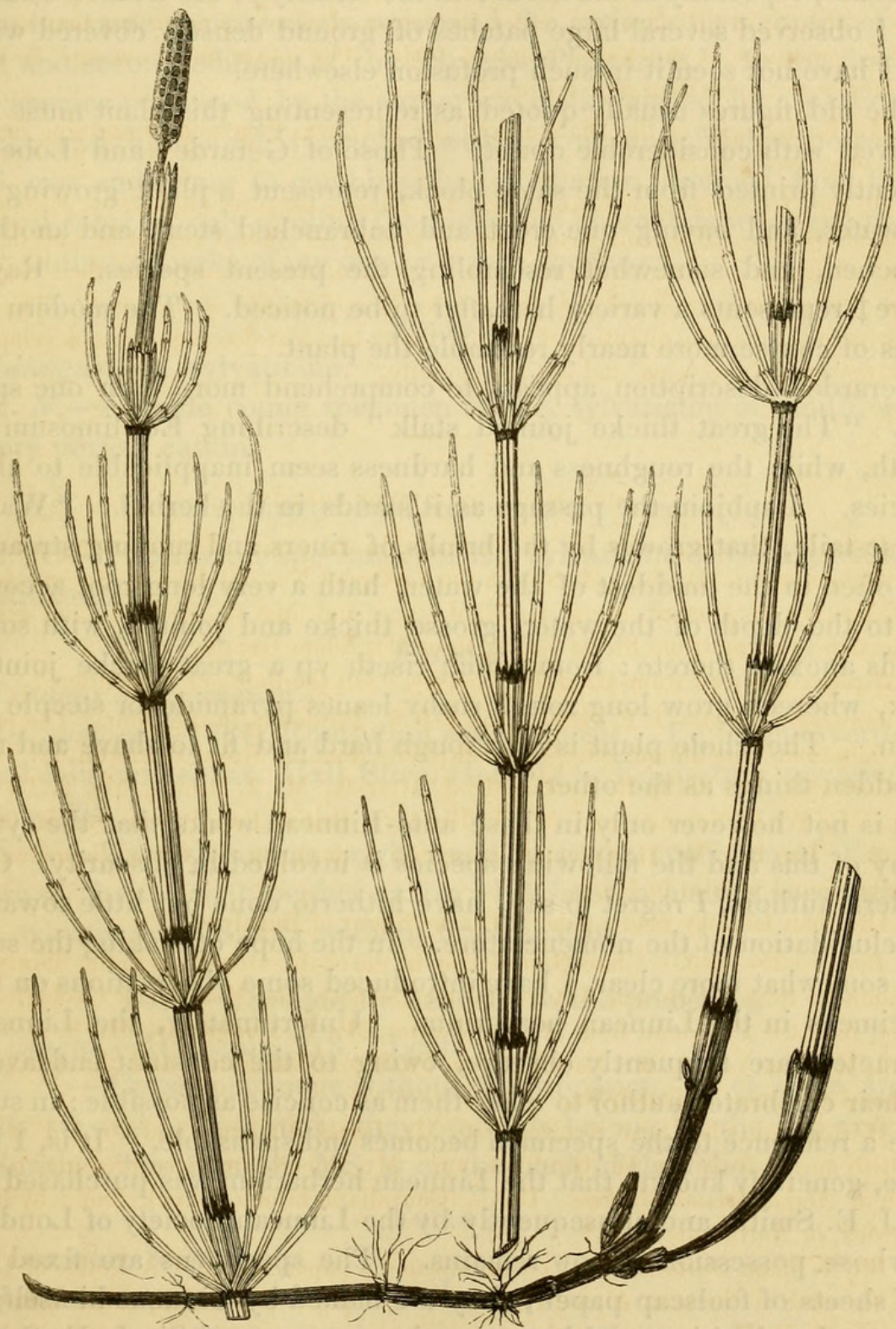


# THE PHYTOLOGIST.

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ART. CXXVIII. — *A History of the British Equiseta.* By EDWARD  
NEWMAN. Continued from p. 340.



MARSH HORSE-TAIL.

EQUISETUM PALUSTRE of Authors.



THIS species appears to be generally distributed: it occurs in all the county lists of ferns which I have received, and is rarely mentioned either as local or uncommon. In Ireland I found it particularly abundant, especially in the north: in the vicinity of the Giant's Causeway I observed several large patches of ground densely covered with it. I have not seen it in such profusion elsewhere.

The old figures usually quoted as representing this plant must be received with considerable doubt. Those of Gerarde\* and Lobel,† evidently printed from the same block, represent a plant growing in the water, and having one erect and unbranched stem, and another branched, and somewhat resembling the present species. Ray's figure‡ represents a variety hereafter to be noticed. The modern figures of course more nearly resemble the plant.

Gerarde's description appears to comprehend more than one species. "The great thicke jointed stalk" describing *Eq. limosum* of Smith, while the roughness and hardness seem inapplicable to that species. I subjoin the passage as it stands in the herbal. "Water Horse-taile, that growes by the brinks of riuers and running streams, and often in the midst of the water, hath a very long root according to the depth of the water, grosse thicke and jointed, with some threds annexed thereto: from which riseth vp a great thicke jointed stalk, whereon grow long rough rushy leaues pyramide or steeple fashion. The whole plant is also rough hard and fit to shave and rub wooden things as the other."

It is not however only in these ante-Linnean works that the synonymy of this and the following species is involved in obscurity. Our modern authors, I regret to say, have hitherto done but little towards the elucidation of the nomenclature. In the hope of making the subject somewhat more clear, I have introduced some observations on the specimens in the Linnean herbarium. Unfortunately, the Linnean characters are frequently obscure, owing to the constant endeavour of their celebrated author to make them as concise as possible: in such case a reference to the specimen becomes indispensable. It is, I believe, generally known, that the Linnean herbarium was purchased by Sir J. E. Smith, and subsequently by the Linnean Society of London, in whose possession it now remains. The specimens are fixed on half sheets of foolscap paper; they are named by Linneus himself, in his own handwriting, and have also the comments of Sir J. E. Smith

\* Ger. Em. 1113.

† Lobel, 795.

‡ Synopsis, tab. v. fig. 3.



wherever it appeared to him necessary or useful to add an explanatory note. A few labels with MS. notes are pasted in, but I am not certain of their author. The Equiseta are comprised in a fasciculus of nine folios: the fasciculus is endorsed thus,—"1169, Equisetum," in the handwriting of Linneus.

In the same apartment are preserved the author's own copies of the first and second editions of the 'Species Plantarum.' In the first all the species possessed by the author are distinguished by a particular mark; and the second is enriched with his own unpublished notes. I will now endeavour to combine the information obtained from these several sources, only quoting the *published* characters when requisite, and adding remarks of my own on every specimen.

## FOLIO 1.

*Linneus*.—1. sylvaticum.

*E. N.*—A single young specimen of Eq. sylvaticum of Smith, with a very perfect catkin.

FOLIO 2, pinned by Linneus to the preceding.

*E. N.*—Two mature specimens of Eq. sylvaticum of Smith, without fructification.

## FOLIO 3.

*Linneus*.—2. arvense.

*Anonymous*.—1061. Equisetum setis ramosis. Equisetum verticillis ad folia numerosis. Hall. Stirp. Helv. 144. Equisetum sylvaticum, tab. p. 253.

*E. N.*—Two specimens: right hand, a fertile specimen of Eq. arvense of Smith, with perfect catkin; left hand a mature specimen of Eq. sylvaticum of Smith, without fructification.

FOLIO 4, pinned by Linneus to the preceding.

*Linneus*.—Hispania, 713. Loeft.

*E. N.*—Three specimens without fructification, all of them apparently starved or distorted: they probably belong to the Eq. arvense of Smith. The Linnean MS. is on the back of the folio.

## FOLIO 5.

*Linneus*.—3. palustre.

*Smith*.—?

*Anonymous*.—1060. Equisetum setis simplicibus. Equisetum minus terrestre. I. B. M. p. 730.

*E. N.*—Two specimens without fructification, and in a very unsa-



tisfactory state of growth : right hand appears to me to be *Eq. arvense* of Smith ; left hand is perhaps *Eq. palustre* of Smith.

FOLIO 6.

*Linneus*.—4. *fluviatile*.

*Linneus* [Sp. Plant.\*]—*Fluviatile* 4. *Equisetum caule striato frondibus subsimplicibus* ; [here follow the synonymes]. *Habitat in Europa ad ripas lacuum fluviorum.* 2l.

———. [MS. addition over the word *striato*], an *striato* ?

———. [MS. addition on the opposite page, the copy being interleaved, and in allusion to a reference to Haller]. *Hoc caules prolieros a sterilibus definitur profert.* Hall. [The passage in Haller is this —“ *Caulis floriger videtur a folioso remotus.*”†]

———. [MS. addition below the preceding]. *Forte mera varietas prioris [palustre] ex solo aquæ profundioris.*

*Smith*.—*limosum* ? *Certè.*

*E. N.*—Four specimens, all with catkins, and identical with *Eq. limosum* of Smith. As there is no representative of *Eq. limosum* of Linneus, and as the marked copy of the work indicates that he did not possess it, I subjoin the character.

*Linneus*.—[Sp. Plant.]. *Limosum*, 5. *Equisetum caule subnudo lævi*, [here follow the synonymes]. *Habitat in Europæ paludibus, turfosis, profundis.* 2l.

———. [MS. addition on the opposite page]. *Hallerus hanc facit varietatem E. palustris.*

*E. N.*—It is clear that Linneus trusts to Ray as the authority for this as a distinct species, since he quotes his figure,† which evidently represents the unbranched form of *Eq. limosum* of Smith. Hence it seems that *Eq. fluviatile* of Linneus is the branched, and *Eq. limosum* the unbranched form of *Eq. limosum* of Smith ; and that *Eq. fluviatile* of Smith has no representative either in the herbarium or the works of Linneus. With respect to the observation of Linneus quoted above, that Haller makes this species a variety of *Equisetum palustre*, I think the criticism is an unjust one. Haller quotes Ray's figure 3, and, as it seems to me, correctly, as a variety of *Eq. palustre* ; while Linneus quotes Ray's figure 2, which is evidently the *Eq. limosum* of Smith. A positive proof that the *fluviatile* of Linneus was not the *fluviatile* of Smith, exists in the fact that he attempted to account for its increased size and altered appearance by its growing from the bottom of deep water : this is the case with Smith's *limosum*, but never with his *flu-*

\* Sp. Plantarum, 1517.

† Haller, *Helv.* 144.

‡ Syn. t. 5, fig. 2, a, b.



viatile, which, on the contrary, affects loose gravelly and sandy places unconnected with water.

## FOLIO 7.

*Linneus*.—*Ædific.*: hyemale.

———. [Sp. Plant. MS. addition on the opposite page]. *Equisetum caule simplici aspero vaginis non laciniatis*. Hall. Helv. 143.—*Caulis viridis scaber, radiis* [?] *vaginæ pallidæ basi marginisque denticulis obsoletis atris gibbis*.

*E. N.*—A single specimen of *Eq. hyemale* of Smith. The word or abbreviation "*Ædific.*" implying its uses, is written apart from the name.

## FOLIO 8.

*Linneus*.—*Tourelle*.

*Smith*.—*Asperimum*, Dick., *variegatum*, Jacq. H. B.—J. E. S.

*Anonymous*.—*Equisetum basiliense*, No. 1678, haller. An species distincta apud cl. linn.? In horto cultum.

*E. N.*—A single specimen of *Eq. variegatum* of Smith. Linneus answers the question as to its being a distinct species, by giving *basiliense* as a synonyme of *hyemale* (*Phytol.* 338). The word "*Tourelle*" written by Linneus is probably a habitat.

## FOLIO 9, pinned by Linneus to the preceding.

*Linneus*.—*Suec.*

*E. N.*—A single specimen of *Equisetum variegatum* of Smith, much more slender than the preceding: the Linnean MS. evidently implies the habitat, Sweden.

I think the above notes will be sufficient to show that as regards several species of *Equisetum*, more especially the present, generally known as *palustre*, the Linnean herbarium is not a sure guide. There is, however, much collateral evidence that Linneus was not only acquainted with the *Equisetum palustre* of modern authors, but that he referred to that species when he named the plant in question; for he expressly states that his *fluviatile* (Smith's *limosum*) may be a variety of *palustre* growing in deeper water. Now as he was so well acquainted with *fluviatile* (Smith's *limosum*), and possessed such good specimens, his judgment cannot be supposed so much in fault as to have referred it to *arvense*. The error must have arisen from a want of care in the selection of specimens for his herbarium. Moreover, the name *palustre* is now too universally employed to admit of its being changed, without a better reason than a discrepancy which may



have originated in carelessness. The same is not the case with fluviatile: I am decidedly of opinion that the name in this instance must be changed; and I make the proposition previously to publishing the species, in order that I may be favoured with the opinions of those botanists who think otherwise. I propose restoring the Linnean name to the limosum of Smith, and sinking the name limosum to the rank of a variety; thus:—

*Equisetum fluviatile*, Linn. = *Equisetum limosum*, Smith.

„ „ *β. limosum*, with the stem quite simple, = *Equisetum limosum* Linn.

The species hitherto called fluviatile is already so well provided with names that it is difficult to determine which to select. It seems to be the *Equisetum majus* of Gerarde\* and Ray,† the *Eq. Telmateia* of Ehrhart‡ and *Flora Danica*,§ and the *Eq. eburneum* of Roth.||

In a plant of which the synonymy is so imperfectly known as the marsh horse-tail, it is by no means an easy task to trace the record of medical and other properties. Haller seems to have collected together a number of wise saws from a variety of sources, and gives them under his *Equisetum* No. 1677: but not only do I doubt whether the whole of them were intended for any one species, but I also doubt whether his No. 1677 is the species now under consideration. The point is not worth a very rigid scrutiny. He makes out his No. 1677 to be hurtful to oxen and cows, giving them diarrhœa and making their teeth loose, but at the same time to be harmless to horses and sheep. He also speaks of the great difficulty of extirpating it from a field where it is once naturalized: of its uses as a medicine he cannot speak with certainty.¶

The roots are slender and frequently divided; they appear to spring from the joints of the rhizoma, and are generally covered with minute

\* Ger. Em. 1113. f. † Ray, Syn. 130. ‡ Ehr. Beitr. ii. 159. Crypt. 31.

§ Flora Danica, tab. 1469.

|| Roth, Cat. i. 129.

¶ Haller, 3. 2. 1677. Hoc equisetum minus quam 1676 tamen et ipsum pecori nocet et dentium facit in bobus et vaccis vacillationem tum diarrhœam. Cum seductus pulchritudine Trifolii Equiseto 1676 inquinati, famulus, qui boum meorum curam gerebat, semel aut iterum vaccam nuper vitulam enixam hac pestilente herba aluisset, ex diarrhœa immedicabili eadem periit. Quare magnis pecuniis nostri arcanum redimerent, quo prata infaustissima herbarum liberarent. Mihi neque aratrum, neque fimus, neque alia cura profuit. Equis non nocet, neque ovibus et rangiferis. Porci nostrates recusant, cum in Suecia non detrectant. Radicibus tamen glandium simile aliquid sæpe adhæret, quod porcos credas requirere.

Vires medicas vix satis certas autumo. Aquosa planta est, parum acris: ei adstringentes vires tribuerunt in diarrhœa, in hæmoptoe efficaces, &c. &c.



Newman, Edward. 1841. "A History of the British Equiseta." *The Phytologist: a popular botanical miscellany* 1, 530–535.

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