Professor Newton's work as a guide, renewed study of our own marine algae should result. The marine forms of New England and of old England are sufficiently similar so that many of the names in the British handbook are familiar to those who have followed the eastern American work of Farlow, Hervey, Collins, Setchell and Holden. In the Algae, as in the Bryophytes and the Lichens, an authoritative work on British species is indispensible to all serious workers in America. The new handbook will, consequently, be needed by many American students.— M. L.F.

ON THE NOMENCLATURE OF ELODEA

C. A. WEATHERBY

FOR many years most standard works have used for the waterweeds of North and South America the name *Elodea* Michx. Fl. Bor. Am. i. 20 (1803). The one exception has been that followers of the American Code have employed Rafinesque's substitute name *Philotria*.

Under the old International Rules *Elodea* could be retained. It differed from *Elodes* Adans. (1763) by the required "one letter" "in the termination" (Art. 58); and the earlier Elodeas of Jussieu (1789) and Ventenat (1799) were variants of Adanson's name, ascribed to him, were therefore illegitimate and could be disregarded. But under the homonym rule adopted at the Cambridge Congress in 1930 illegitimacy, in cases like this, is glorified. Dogs-in-the-manger are sanctified; a name which can never be used in the sense in which it was proposed can prevent the use of the same name in another sense, even though it may have been long established and without impediment therein. Thus a large number of serviceable and familiar names, *Elodea* among them, are, unreasonably, wiped out.

Elodea, then, passes, to the accompaniment of eight new combinations. In choosing its successor, taxonomic considerations come into play. If the genus is taken in the sense of Caspary, Bentham & Hooker, Engler & Prantl and Dalla Torre & Harms, to include both dioecious and hermaphrodite species, the earliest available name applicable to any part of it is *Anacharis* Rich., proposed in a paper read before the Institute at Paris Jan. 14, 1812, and published in Part 2 of the Mémoires de la Classe des Sciences Mathematiques et Physiques for 1811, which is usually dated 1812, but according to Caspary[1] was not actually issued until 1814. *Philotria*, Rafinesque's renaming of *Elodea* Michx. because of "Elodea" Adans., did not arrive until

[1] Pringsh. Jahrb. Wiss. Bot. 425 (1858).

January, 1818; ANACHARIS, therefore, becomes the correct name for the genus.

Victorin, however, in a clearly reasoned and, as always with him, delightfully written paper (Contr. Bot. Lab. Univ. Montréal xviii (1931)) has revived Richard's division of the group (in the Memoir above mentioned) into two genera, *Elodea* (now become *Philotria*) with hermaphrodite flowers and three stamens and *Anacharis*, dioecious and with nine stamens in the male flowers. Since all the North American species are at least normally dioecious, ANACHARIS is still the correct name for them under this interpretation.

There remains, however, a question of typification. In the original publication of *Elodea*, by Richard's statement really his genus and not Michaux's, the flowers were described in detail as hermaphrodite. The one species regularly cited (though the then unpublished *E. guyannensis* is casually referred to in a note), *E. canadensis*, is dioecious. Victorin argues that the description was drawn, not from *E. canadensis*, known to Richard only from Michaux's rather fragmentary dried specimens, but from *E. guyannensis*, which Richard had seen and studied in the field in French Guiana in 1789. Victorin, therefore, takes *E. guyannensis* as typical of the genus and, as above noted, restricts the application of *Philotria* to the hermaphrodite South American species.

This interpretation has great historical probability; but there will be those who will argue against it somewhat as follows. Richard, misled by the great morphological similarity of the pistillate flowers of *E. canadensis* to the bisexual flowers of *E. guyannensis*. and by the presence of staminodia in the former, doubtless believed he was describing *E. canadensis* in his generic diagnosis. The error was the easier because he knew neither the staminate flowers of *E. canadensis* nor the pistillate flowers of *Anacharis* which was founded solely on male material of a single species. There are many instances of morphological misinterpretation in early literature which are not allowed to affect the application of names clearly placed by citation of species. In any case, definiteness is, in nomenclature, a far brighter jewel than historical probability; what an author actually did, even if mistakenly, is a much surer basis for typification than what one thinks he thought. Richard actually cited *E. canadensis* under *Elodea;* Britton designated it as the type of the taxonomically identical *Philotria;* it should remain the type.

Under this interpretation, Richard, in his second publication, unwittingly shifted the application of *Elodea*. His *Anacharis* is, in effect, a renaming of his first *Elodea*. His second *Elodea* becomes a later homonym of the first; *Philotria*, a later synonym of *Anacharis*. The South American hermaphrodite species have to take the name *Apalanthe* Planch. Ann. Sci. Nat. ser. 3, xi. 75 (1849). But ANACHARIS again steps forth as the correct appellation for the North American species!

By whichever of the three possible taxonomic approaches, then, one goes at the matter, the nomenclatural conclusion is the same—an uncommonly and unexpectedly happy result.

GRAY HERBARIUM.

ANOTHER LOCALIZED VARIETY OF BIDENS HETERODOXA.—BIDENS HETERODOXA (Fernald) Fernald & St. John, var. **atheistica**, var. nov., *B. heterodoxam* et var. *orthodoxam* Fern. & St. John valde simulans; acheneis exterioribus 4–4.8 mm. longis interioribus 5–7 mm. longis strigosis, aristis nullis vel perbrevibus antrorse barbellulatis.—QUEBEC: tidal mud and slaty gravel by the St. Lawrence, Berthier, Co. Bellechasse, September 14, 1931, *Fernald*, no. 2952; tidal mud of the St. Lawrence, Anse St. Vallier, Co. Bellechasse, September 15, 1931, *Fernald*, nos. 2955 (TYPE in Gray Herb.), 2960.

Bidens heterodoxa, originally from tidal mud on Prince Edward Island, has normally developed awns, though antrorsely barbellate; var. *orthodoxa* of the Magdalen Islands is quite similar, but with retrorsely barbed awns; var. *agnostica* Fernald, known at a single station in Connecticut, has the long awns smooth and polished, not barbed. Another variety, from the same Connecticut station, var. *monardaefolia* Fernald, has long retrorsely barbed awns and leaves much broader and less saliently toothed than in the northern varieties. Var. *atheistica*, essentially without awns, has the foliage, involucres and other characters quite as in typical *B. heterodoxa*.

The occurrence of an awnless *Bidens* on the broad and deeply flooded tidal flats of the St. Lawrence is peculiarly interesting, in view of the occurrence with it of the wholly anomalous *Epilobium ecomosum* (Fassett) Fernald, RHODORA, xxxiv. 39 (1932), an estuarine species quite lacking the coma which is found in all other species of *Epilobium*. To those who profess not to believe in *adaptations* and *survival of the fittest*, these two cases are specially commended; in the tidal flats regu-

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