

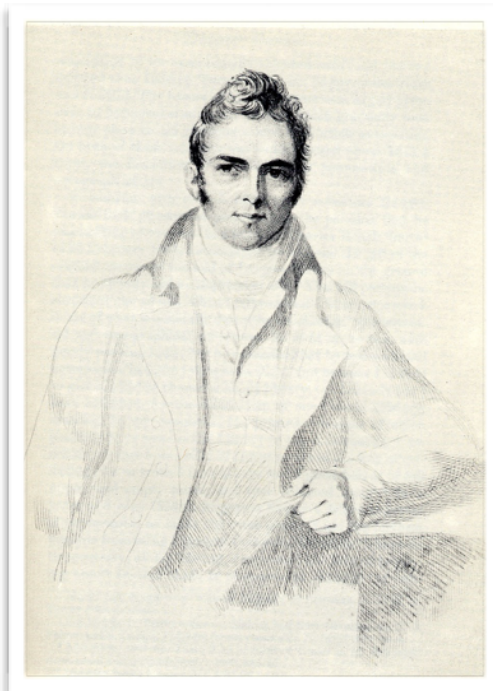
# Phycological Trailblazer

## No. 19

### Dawson Turner

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Dawson Turner (1775-1858) was a wealthy banker in Yarmouth, England, but a botanist and inveterate collector by avocation. Sir James E. Smith called him “that exquisite cryptogamist”. Turner’s early interests were with plants in general and mosses, lichens, and marine algae in particular. His earliest papers reveal that he was a field-oriented person. Living close to the Norfolk coast, he was able to carry out observations on the algae of the local shore year-round, and thus in 1800 he contributed one of the first-ever phenological studies on benthic marine algae. He produced a list of the species of *Fucus*, *Conferva*, and *Ulva* (at that time almost all the seaweeds fell into those three genera), and the seasons at which these algae produced their “fructifications”. Clearly, he was an astute observer in that he noticed that *Fucus subfuscus* [*Rhodomela confervoides*], one of the most common species upon the Norfolk shore, “fructified only in the earliest months of the spring.” However, it was generally collected in Sept. and often in the winter months, at which time its stems and branches were swollen and gave the false impression of being reproductive. He described several new species from local



Dawson Turner (engraving by Mrs. Turner from a drawing by Thomas Phillips in 1816; from Munby, 1962).

shores (1801, 1802a), such as *Ulva furcellata* [*Scinaia*], *U. multifida* [*Cutleria*], *Fucus ruscifolius* [*Apoglossum*], *F. crenulatus* [*Gymnogongrus*], *F. clavellus* [*Lomentaria*], and *F. wiggii* [*Naccaria*]. In 1806 he described *F. tenax* [*Gloiopeltis*] on a collection sent to him from China. He had a broad appreciation of botany and with his friend James Sowerby published a list of the plants, ferns, fungi, lichens, and algae they encountered while touring the western counties of England (Turner & Sowerby, 1800). He spent the summer of 1803 in Ireland with his focus at this time entirely on mosses. He carried out much field work and studied collections in the herbaria in Dublin and elsewhere. The

following year (1804b) he published a small book in Latin and with 16 colored plates done by Sowerby. This book was the first that was devoted to the mosses of Ireland.

Turner lived in a time of exploration. Owing to his status as one of the most knowledgeable cryptogamists of the time, he was the fortunate recipient of algal collections being made from around the world. He received collections made by Archibald Menzies, the surgeon initially on a commercial expedition under the command of Capt. James Colnett, in the period 1786-1789. Later, Menzies served as surgeon/ naturalist on Capt. George Vancouver’s expedition (1791- 1795) (Scagel et al. 1989). This latter expedition visited the northwest coast of America and the west coast of South America: *F. floccosus* [*Odonthalia*], *F. lividus* [*Sarcothalia*], *F. menziesii* [*Egregia*] (fig. 2). Sir Joseph Banks sent to Turner collections from Australia: *F. banksii* [*Hormosira*], New Zealand: *F. abscissus* [*Melanthalia*], and the Cape of Good Hope: *F. erinaceus* [*Nothogenia*]. Many specimens collected in Asian waters by



Fig. 1. *Fucus Menziesii* [= *Egregia menziesii*], pl. 27, Turner (1808)

Horner on his voyage around the world were transmitted on to Turner by Prof. Mertens: e.g., *F. horneri*, *F. hemiphyllus*, *F. microceratius* [all now in *Sargassum*]. Lord Valentia sent him specimens of new species of *Sargassum* and *Hypnea* from the Red Sea. Specimens were sent from Jamaica by Dr. Wright, from St. Croix by Martin Vahl, and from the Straits of Sunda, Indonesia, by Mr. George Watts. A major contributor to Turner's *Fuci* was Robert Brown, the botanist on board the HMS *Investigator* (1801-1805) under the command of Capt. Matthew Flinders. Thanks to Brown, Turner received about 50 specimens collected from southern Australia and the eastern coast to Arnhem Land (Ducker, 1981b) and from New Zealand: *F. quercifolius* [*Platythalia*]. Turner also received material from Governor King in Australia: *F. lambertii* [*Callophyllis*]. These algae were handsomely depicted in the four volumes of Turner's *Fuci* (1807-1819). It should be pointed out that these beautiful plates were executed almost entirely by his future son-in-law,



Fig. 2. *Fucus langsdorfii* Turner. Pl. 165, fig. a, in Turner (1811). [= *Coccophora langsdorfii* (Turner) Grev.]

William Jackson Hooker. Over a thirteen-year period, starting in 1806, Hooker became practically a member of the Turner family, staying in "Bank House" and eventually completing 234 plates of the total of 258 plates in the *Fuci*. Turner's behavior toward Hooker was said to be unforgivable in that he barely acknowledged Hooker's monumental contribution to the four volumes (Allan, 1967). The only acknowledgement came from the tiny inscription W.J.H. Esq<sup>r</sup>. del.<sup>t</sup> on most plates.

Because the publication of this series of his *Fuci* became more and more sporadic, Turner received criticism from his contemporaries (Price, 1984). At the time "a fair amount of acrimony...was generated...by Turner's inconsistency and drift." (Price, 1982). In the

advertisement (dated 16 Jan. 1819) accompanying the final fascicle of his *Fuci*, Turner signed off and profusely apologized “for the frequent irregularities in the appearance of the later numbers”. He realized that the knowledge of the *Fuci* was “in its infancy”. He also acknowledged the major new arrangement of “this interesting tribe of plants” that had been contributed by Monsieur Lamouroux of Caen (1813). Turner regarded Lamouroux’ classification as “ingenious and embracing a comprehensive view of the subject”. Turner expressed a degree of satisfaction that he had “laid before his readers a set of figures, upon the accuracy of which they may rely”. That was an understatement because taken as a whole the quality of the 258 plates in his *Fuci* has never been surpassed. Even today Turner’s work can prove to be the source of new recognitions (Wynne, 2002).

Turner married Mary Palgrave in 1796, and they eventually had a total of eleven children. In 1812 the Turners persuaded the artist John Sell Cotman to settle in Yarmouth, and they arranged for him to tutor their daughters in draftsmanship and watercoloring. Turner had the means to serve as the lifelong patron to Cotman and essentially had a “cottage industry” under his roof with his several artistic daughters adding watercolors to the plates. Turner’s eldest daughter, Maria, married Hooker, the draftsman of most of the plates in Turner’s *Fuci*. Hooker would eventually become Sir

William, the renowned botanist at Kew. In the summer of 1814 Turner traveled with his wife and two of his six daughters (Maria and Elizabeth) along with Hooker to Paris. This was

the first time English citizens were allowed to set foot on French soil because of the preceding years of the Napoleonic wars. The party was able to visit the Muséum d’Histoire Naturelle and to attend meetings of the “Academie des sciences” (Ducker, 1981). Also at those meetings were such celebrated scientists of the time as Lamarck, de Jussieu,

Alexander von Humboldt, and Labillardière.

Turner had a branch of his bank in Halesworth, managed by his brother James. The two Turner brothers and Samuel Paget bought an ale-producing brewery in Halesworth, along with some public houses and an associated home called the “Brewery House”. Turner later invited Hooker to buy into the brewery venture as a quarter shareholder for £8000, which came from Hooker’s inheritance. Hooker took on the job of superintending the brewery, and this allowed him to reside in Brewery House, which had a large garden and a heated greenhouse, where William could raise exotic orchids.

Turner was thus the maternal grandfather of Sir Joseph Dalton Hooker, the junior surgeon and botanist on the British Antarctic Expedition of 1839-1843 under the command of Sir James Clark Ross (H.M.S. *Erebus* and H.M.S. *Terror*), which made significant algal collections from New Zealand, Tasmania, and Antarctica. J. D. Hooker, who often collaborated



Fig. 3. *Fucus alatus* Huds. Pl. 160, fig. a in Turner (1811). [= *Membranoptera alata* (Huds.) Stackh.]

with William H. Harvey of Dublin, was said to be “the most important botanist of the nineteenth century and one of the key scientists of his age” (Musgrave et al. 1999).

What became the major obsession in Dawson’s later life was the collecting of autographed letters. He was methodical in saving all, or nearly all, the letters that came to him and then binding them into volumes in chronological sequence such that he eventually had more than 150 volumes of bound correspondence (Munby 1962). Trinity College, Cambridge, has 82 volumes of his correspondence (Desmond, 1994). He wrote so many letters that maybe it is not surprising that a letter written by Turner to a friend of his son-in-law Sir William and dated “20 Feby 1850” was found tucked in my copy of Turner’s *Fuci*. The two main topics in the letter treat Turner’s health (he was in his mid-70’s) and his ongoing pursuit of autographed letters. Parts of that letter follow:

*My dear Sir: You may naturally have felt surprized at having been thus long without any acknowledgement of the letter you wrote me on the 24th of last month; and your surprize will hardly be diminished upon receiving the inclosed abstract from a letter from Mr. Fitch, which I hope I have not sent you previously. If I have, pray pardon me, & ascribe it to the same cause which has prevented my writing & has left me very much in ignorance of which I have done or not done, a long confinement to my bed & chamber, in consequence of a fall headlong down a flight of six stairs. The effect, I am thankful, has been far from serious; having been confined to severe bruises of my left shoulder & right ankle, without fracture & without dislocation. Nevertheless, a man of 74 does not escape from such a shock without feeling enfeebled; & I continue to a certain degree, tho’ not materially, crippled. You will pardon me that I trouble you with these details, which I felt necessary to plead my excuse. [He goes on to discuss a Mr. Fitch, P. Collinson, the Ipswich Public Library, Geo. Ransome, Mr. Garrod (an auctioneer), and “the late Mr. Rodd”. The letter then continues:]*

*I have myself but a single letter of Peter Collinson’s, a short one, addressed to Boolase, and introducing a Dane, a friend of Solander’s, who wish to visit the Cornish mines. Of this, as of Calder’s and Muhlenberg’s, Dr. Cambridge is quite welcome to a copy; but would you object to ask him to write to me & express his wish for them? You will probably wonder at such a request on my part; but the truth is, that I shall be glad of his handwriting. One of the great amusements of my declining years has been the collecting of letters written by men of eminence. I could easily tell you what pleasure I feel in the pursuit; & I look with no little pride upon my collection, the largest, I apprehend, in the world, containing little less than 25,000 letters, all carefully arranged and handsomely bound, and copiously illustrated with portraits & biographical anecdotes. To show them to you in the course of the coming summer would be a very great pleasure to me: indeed it could not be otherwise than a high gratification, to receive under my roof one of the oldest and most valued friends of a son I have such infinite reason to love & esteem as Sir Wm. Hooker.*

*I am*

*my dear Sir*

*Very Faithfully yours*

*Dawson Turner*

Munby (1962) characterized Turner as going beyond being a collector: “Moreover when we examine Dawson Turner’s own publications we can at once recognize the symptoms of bibliomania in an advanced form...” Despite this unfavorable regard for Turner’s life-long drive to collect and despite the criticism he received when the rate of publication of the fascicles of his *Fuci* lagged, Turner should be remembered as one who made significant contributions to cryptogamic botany in a period of exploration and discovery.

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**Michael J. Wynne**  
**University of Michigan**