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Alire Raffeneau Delile

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Alire Raffeneau Delile (1778-1850) was born at Versailles a decade prior to the French revolution. His father was equerry to the king, and his mother was in service to the queen (Duval, 1982). As typical of his time, Delile was both a practicing physician and a botanist. By his high marks on a competitive exam, he was admitted to the École de Santé in Paris. Although he was apprenticed to Dr. Brunyer, a physician in the hospices of Versailles, he spent his free time wandering the gardens and conservatories of the Trianon. Conversations with the eminent botanist Lemonnier shifted his focus to plants. Delile also met René-Louiche Desfontaines, who was influential in Delile's decision to participate as a botanist in Napoleon Bonaparte's exploratory expedition to Egypt, even though Delile was only twenty years old. In fact, Delile was a replacement on the expedition for Desfontaines (Rioux, 2003). This conquest of Egypt by the army of Napoleon in the period from 1798 to 1801 was not only a military operation but also a scientific and cultural phenomenon (Silva &

Lipkin, 2003). A senior director of the scientific project was the zoologist Geoffroy Saint-Hilaire. The keen interest in all things Egyptian extended even to the algae, and a total of 35 species were collected: 23 species from the Mediterranean (in the vicinity of Alexandria) and 12 species from the Red Sea (Aleem, 1993). The large-formatted 62 plates were executed by the artist Henry-Joseph Redouté, brother of the renown Pierre-Joseph Redouté. Among the new species described by Delile (1813b, 1826) was *Ulva fasciata* (Fig. 1), a species now thought to be identical to *Ulva lactuca* Linnaeus. He also described *Fucus taxiformis* [= *Asparagopsis taxiformis* (Delile) Trevisan], *Fucus nayadiformis* [= *Acanthophora nayadiformis* (Delile) Papenfuss], *Fucus cyanospermus* [= *Palisada perforata* (Bory) K.W. Nam], *Fucus*

antennulatus [= *Cystoseira myrica* (S.G. Gmel.) C. Agardh], and *Fucus tetragonus* nom. illeg. [= *Sargassum dentifolium* (Turner) C. Agardh].

While Delile was in Egypt, the French fleet was destroyed by the British Navy under the command of Rear Admiral Horatio Nelson in the Battle of the Nile, or Battle of Aboukir Bay, on 1 August 1798. This defeat brought French designs in the Middle East to an end. The return of Delile and his compatriots to France was initially blocked. But

Delile and the others were content to carry on their scientific work. Delile was able to continue to collect plants, such as papyrus, and to cultivate many of them on the grounds of a villa in Cairo, which he



Alire Raffeneau Delile (from Rioux, 1994, Le Jardin des plantes des Montpellier...).

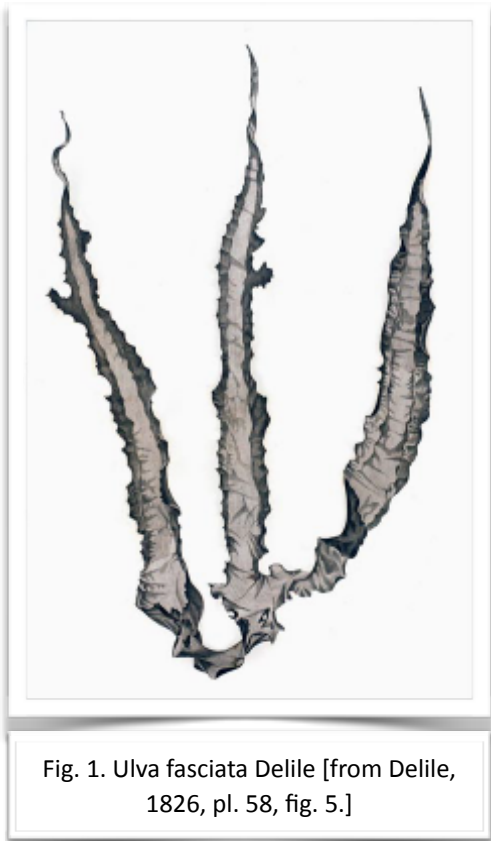


Fig. 1. *Ulva fasciata* Delile [from Delile, 1826, pl. 58, fig. 5.]

fashioned into a botanical garden (Duval, 1982). Delile also was captivated by the sacred lotus (*Nymphaea lotus*), growing along the banks of the Nile. He recorded careful observations on its biology.

Eventually, the British troops entered Cairo, and Delile and his fellow scientists participated in the struggle. As the British took the city, Delile and his fellow Frenchmen made every effort to evacuate with their scientific collections, which for Delile included not only his herbarium but also his living plants. After much travail, including a small caravan conducted at night with the help of a Muslim friend, Delile managed to load most of his collections onto the brig *L'Oiseau*. The ship was intercepted by the British on the high seas, and at first Delile's collections were confiscated on the basis (of "Article XVI of the Alexandria capitulation") that the Egyptian flora was classified as "art objects". Delile protested to the English admiral, saying that he would not leave his

plants behind and would go to London with them, if need be (Duval, 1982). The British admiral was impressed by the arguments made by this twenty-two-year old, relented, and let the plant collections leave with the *L'Oiseau*. Thus, in November 1801, Delile returned to France along with his valuable collections. Back working at the "King's Garden", Delile succeeded in publishing on the Nile lotus and on the Liliaceae of Egypt, while he contemplated a more major work on the Egyptian flora. But this time of great governmental upheaval (Napoleon Bonaparte had declared himself First Consul for life) was also a time when Delile suffered from melancholy and great inner turmoil (Duval, 1982). He had only partially worked up his Egyptian collections when he felt the need for a complete change of view. Napoleon himself offered Delile the new post of subcommissioner for commerce in North Carolina, apparently as a way to interrupt Delile's botanical career at least for a time and to pull him out of his neurotic state (Duval, 1982). Thus, Delile accepted this foreign assignment as a representative for the French government, and he sailed for North America, arriving in Wilmington. There, representing France, he worked to facilitate French-American commercial relations (Gillispie, 1970). He left that assignment in 1806 and moved to Philadelphia where he worked with the physician, Dr. Benjamin S. Barton at the Pennsylvania Hospital (Stafleu & Cowan, 1976). This led to his resuming his medical studies there, and he continued his studies at Columbia College in New York City. In May 1807, he successfully defended his M.D. thesis on tuberculosis (Delile, 1807). This thesis was dedicated to the late doctors Desgenettes and Larrey, Chief Physician and Chief Surgeon, respectively, of the Army of Egypt. Shortly thereafter, he was recalled by France to resume the job of editing the flora of Egypt, a work that he completed in 1809

(Delile, 1813a, b, 1826). A second edition of the text appeared in 1824.

With these accomplishments, Delile became a candidate for the professorship of botany at the Faculty of Medicine at the University of Montpellier, but A. P. de Candolle was awarded that position (de Candolle, 2004; Bungener, 2004). This forced Delile to return to his medical practice. Upon the collapse of the French empire in 1819, de Candolle left France for Switzerland, and Delile was appointed to that position, a professorship in Medical Natural History at the University of Montpellier, a position that he held until his death in 1850 (Rioux, 1994). Delile had many and diverse publications, only a small fraction having to do with his experience in Egypt (Gillispie, 1970). His research interests included not only the algae but fungi, bryophytes, ferns, and seed plants. He had a paper on the phenomenon of bioluminescence in the mushroom *Agaricus olearius* DC (Delile, 1837). His reputation as having participated in Napoleon's expeditionary forces into Egypt gave him the sobriquet "Delile l'Égyptien" to his colleagues in Montpellier (Rioux, 2004). The genera *Delilia* Sprengel (1823) of the Asteraceae, *Lilaea* Bonpland in von Humboldt & Bonpland (1808) of the Juncaginaceae, and *Raffenaldia* Godron (1859) of the Brassicaceae were named in his honor.

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