

Phycological Trailblazer

No. 1

Carl Skottsberg

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This is the first in a series of articles about a select group of pioneering phycologists who made daring travels around the globe in search of algae. The common thread is that these individuals explored remote parts of the world, often at a degree of peril to their own safety, simply to make collections. We can now look back on their quests as being on the heroic side. It is the aim of these brief accounts to draw attention to the efforts of these phycological adventurers and some representative literature, both a sampling of their own publications and other pertinent articles.

Certainly the exploits of the Swede Carl Skottsberg (1880- 1963) epitomize this spirit of adventure. His willingness to subject himself to arduous field conditions in regions far from home in search of the unknown is remarkable. Peterson (1964) remarks that no other Swedish botanist had traveled so widely as Skottsberg. When you consider that Sweden was the home of Linnaeus, who sent out many of his students throughout the world in search of plants, then this accomplishment attributed by Peterson to Skottsberg would be quite a feat. At the young age of 20 Skottsberg participated on the Swedish Antarctic Expedition of 1901-1903 under the leadership of Otto Nordenskjold, geologist and explorer (Nordenskjold & Andersson, 1905). That expedition came to its

conclusion with the shipwreck of the s / s "Antarctic." After surviving the shipwreck and the rigors of overwintering, the crew and the members of the expedition, including Skottsberg, were rescued, along with the invaluable collections. Skottsberg published an account of the brown algae (1907) and later of the red algae (1919, with Harald Kylin as co-author). Skottsberg's appetite for exploration was whetted by this early experience, since he, along with two geologists Thore G. Halle and Percy D. Quesnel, organized the Swedish Magellanic Expedition of 1907 to 1909, with Skottsberg as

leader. These intrepid explorers managed to visit the Falkland Islands, the Juan Fernandez Islands, South Georgia, Patagonia, and Tierra del Fuego, reaching many locations, which had not previously been botanized. A fascinating personal account of this expedition, entitled "The Wilds of Patagonia," was written by Skottsberg, the English edition appearing in 1911. It is one thing to read a dry, technical description of an algal species in a flora, but it is another thing to read Skottsberg's much more dynamic account of his



Carl Skottsberg (1880-1963)

experiencing a low tide in the Falkland Islands: " ... a precious world spread out on the dry rocks or in half-emptied pools. The rocks are covered with seaweeds, green and reddish brown, of all shades and colours; half dead from thirst, they await the arrival of another tide which shall restore them to life A carpet of rose-coloured calcareous algae covers the rock, and here and there are patches of other seaweeds, from the largest blade-like variety to the small, elegant bushes, displaying the brightest scarlet of crimson, purple or violet colouring. . . . Deeper down the gigantic Durvilleas roll their bodies in

the foam—they are some feet broad and many feet long, and fastened on the bare rock by means of a short thick stalk, and a disc just like a horse's hoof. Below lies the forest of the ocean ... the arboreal *Lessonia*, with trunks many feet long and as thick as a man's thigh, carrying a crown of large yellowish-brown leaves, just peeping above the water It is a magnificent sight."

Another incident occurred on Juan Fernandez Island, or "Robinson Crusoe's Island," the endemic sandal-wood, *Santalum fernandezianum*, had been totally harvested and regarded as extinct, but a single old and dying specimen was known in a remote valley. He made a trek to observe it, saying that he looked "at the old tree with a religious respect," standing "at the deathbed of a species."

Over the years Skottsberg made several trips to the Juan Fernandez Islands and the Hawaiian Islands, as well as working in Northern Africa, Australia, North America, Japan, Indonesia, Sri Lanka; and most European countries.

Skottsberg described a number of new algal genera, including *Polycoryne*, *Dendrymenia*, *Microrhinus*, *Cladodonta*, *Pseudophycodrys*, *Anisocladella* and *Antarctocolax* of the Rhodophyta and *Geminocarpus*, *Phaeurus*, *Utriculidium*, *Cystosphaera*, *Ascoseira*, *Gononema* (with P. Kuckuck), and *Cladochroa* of the Phaeophyta. Three of his genera, *Phaeoglossum* and *Phyllogigas* (both placed in the Laminariaceae) and *Himantothallus* (regarded as a "genus incertae sedis"), were subsequently demonstrated by Moe and Silva

(1977, 1981) to represent a single species of Desmarestiales *Himantothallus grandifolius*.

In addition to his research on the algae and flowering plants, Skottsberg had many other accomplishments in his long and distinguished career. He assumed the assignment of organizing the new Botanical Garden of Gothenburg, serving as its Director for many years.

Personality-wise, Skottsberg reveals a bit of himself in the 1961 obituary he wrote for Nils

Svedelius, his contemporary (but several years senior) at the University of Uppsala. Skottsberg referred to Svedelius as having "enjoyed a refined education" and having perfect manners and an aristocratic bearing, and he went on to say that it never would have occurred to Svedelius "to kick over the traces, something which, indeed, could not be said of all of us." Skottsberg reminisced about his student days and how after the meetings of the



Fig. 1. *Microrhinus carnosus* Skottsberg. [Fig. 10 in Skottsberg (1923)].

Student's Natural History Society (botany section) they would repair to "some student's den to go on talking into the small hours." All in all, Skottsberg was a fascinating character who demonstrated a life-long curiosity to explore the world and to discover its botanical treasures.

Moe, R.L., & P.C. Silva. 1977. Antarctic marine flora: uniquely devoid of kelps. *Science* 196: 1206-1208.
 ___ & ___ . 1981. Morphology and taxonomy of *Himantothallus* (including *Phaeoglossum* and *Phyllogigas*), an Antarctic member of the Desmarestiales (Phaeophyceae). *J. Phycol.* 17: 15-29.
 Nordenskjöld, N.O.G., & J.G. Andersson. 1905. *Antarctica or Two Years amongst the Ice of the South Pole.* 2

- Parts. xviii+ 608 pp., maps. English Edition. Hurst & Blackett, Ltd. London.
- Peterson, B. 1964. Carol Skottsberg 1880-1963. *Taxon* 13:1-7.
- Skottsberg, C. 1907. Zur Kenntnis der subantarktischen und antarktischen Meeresalgen. I. Phaeophyceae. *Wiss. Ergebn. Schwed. Sudpolar-Expedition 1901-1903 unter Leitung von Dr. Otto Nordenskjöld. Vol. 4(6).172pp.,10 pis., 1 map.* Stockholm.
- _____. 1911. The Wilds of Patagonia. A narrative of the Swedish Expedition to Patagonia, Tierra de/ Fuego and the Falkland Islands in 1907-1909. xix+ 336 pp. Edward Arnold, London.
- _____. 1923. Botanische Ergebnisse der schwedischen Expedition nach Patagonien und dem Feuerlande 1907-1909. IX. Marine , algae. 2. Rhodophyceae. *K. Sv. Vet.-akad. Handl.* 63(8). 70 pp .
- _____. 1941a. Communities of marine algae in Subantarctic and Antarctic waters. *K. Sv. Vet.-akad. Handl. , Ser. 3, 19(4).* 92 pp ;, 3 pis.
- _____. 1941b. Marine algal communities of the Juan Fernandez Islands, with remarks on the composition of the flora . In: *The Natural History of Juan Fernandez and Easter Island, C. Skottsberg (ed.). Vol. 2, pp. 671-696, 1 pl.* Uppsala.
- _____. 1953. On two collections of Antarctic marine algae. *Arkiv Botanik* 2: 531-566.
- _____. 1961. Nils Eberhard Svedelius 1873-1960. *Biograph. Memoirs Fellows Roy. Soc. (London)* 7:295-312, 1 pl.
- _____ & H. Kylin. 1919. Zur Kenntnis der subantarktischen und antarktischen Meeresalgen. 11. *Rhodophyceae. Wiss. Ergebn. Schwed. Sudpolar-Expedition 1901-1903 unter Leitung von Dr. Otto Nordenskjöld. Vol, 4(15).* 88 pp., 1 pl. Stockholm.
- _____ & M. Neushul. 1960. *Phyllogigas* and *Himantothallus*. *Antarctic Phaeophyceae. Bot. Marina* 2: 164-173.

In addition, the following are sources of more detailed references:

- Bibliographia Skottsbergiana [literature up to 1Dec.,1940]. *Acta Horti Gotoburgensis* 14: 239-330.
- Bibliographia Skottsbergiana. II. 1966. [compiled by B. Peterson]. *Vetensk.-Vitterhe.-Samhalles handl., ser. A, 7(4).* 88 pp.
- Stafleu, F.A. & R.S. Cowan. 1985. Carl Johan Frederik Skottsberg. Pp. 627-639. *Taxonomic Literature. Second Edition. Vol. 5: Sal-Ste. Bohn, Scheltema & Holkema, Utrecht, Antwerp.*