SPONGES AND POLYZOA OF THE INDAWGYI LAKE, BURMA.

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In the fauna of the lake the sponges and Polyzoa are very poorly represented. Only one species of sponge and three of Polyzoa were found in the marginal zone of the lake. The specimens were obtained on a species of stout reed common in the marginal area and on leaves of other aquatic plants. *Hislopia lacustris*, the commonest species of Polyzoa in the lake, was also found encrusted on the outer surface of the shells of *Viviparus indawgyiensis* Rao.[1]

The species of sponges and Polyzoa living in the lake are common in most parts of India and Burma. Their range often extends beyond the Indian Empire to other outlying countries of Asia and to Africa.

The following species were found in the lake :—

Sponges.

Trochospongilla latouchiana Annandale.

Polyzoa.

Hislopia lacustris Carter.
Plumatella (*Afrindella*) *tanganyikae* Rousselet.
Lophopodella carteri (Hyatt).

Sponges.

Trochospongilla latouchiana Annandale.

1907. *Trochospongilla latouchiana*, Annandale, *Journ. As. Soc. Bengal*, III, p. 21.
1911. *Trochospongilla latouchiana*, Annandale, *Faun. Brit. Ind. Freshwater Sponges*, etc., p. 115.

This sponge was found at the northern end of the lake near Nyaungbin growing on stout reeds, many of which bore colonies of *Hislopia lacustris*. It is very thinly encrusted and does not exceed more than two inches in length along the reed. In spirit it has a slaty gray colour. Gemmules were not very numerous, but the few present are found attached to the base of the sponge.

In Burma the species has been previously recorded from Tenasserim. It was curiously absent in the Inle Lake in the S. Shan States.

Polyzoa.

Suborder Ctenostomata.

Hislopia lacustris Carter.

1918. *Hislopia lacustris*, Annandale, *Rec. Ind. Mus.*, XIV, p. 78, pl. xxi, fig. 4.

The species occurs commonly on reeds and leaves of aquatic plants, and on shells of *Viviparus indawgyiensis* at the northern end of the lake

[1] The species is described on p. 279.

near Nyaungbin and at the southern end near Lonton. The aperture of the zooecia is square in outline and bears at each corner a well-developed spine. The spines have apparently dropped in some parts of the zooaria.

The species is probably widely distributed in the Indian Empire, but the typical form has been recorded mostly from N. India and Lower Burma.

Order PHYLACTOLAEMATA.

Plumatella (Afrindella) tanganyikae Rousselet.

1912. *Plumatella (Afrindella) tanganyikae*, Annandale, *Rec. Ind. Mus.*, VII, p. 142.

With some hesitation I refer to this species a small colony found growing on a blade of grass at the north end of the lake near Nyaungbin. None of the polypides is expanded. Owing to the opaque nature of the ectocyst the form of the lophophore is difficult to make out. No statoblasts are present in any part of the colony. The stiff ectocyst and the truncated and minutely roughened zooecia, and the branching of the zooaria give the colony a close resemblance to this species, and in several respects it agrees with the original description of the species.[1]

The colour of the zooaria in spirit is dark brown, but the ventral surface of the colony and the terminal parts of individual zooecia are paler in colour. The surface of the zooaria is nearly smooth, especially the flat ventral portion, but the curved upper surface is covered chiefly with the remains of diatoms. A few minute sand grains and broken sponge spicules are also found amongst the diatoms. No furrows or annulations are present on any part of the zooecium. The edge of the zooarium at the junction of the flat and curved parts is produced into a narrow thin velum at the sides which also contains particles of sand and other debris. The distal part of each zooecium, particularly of the younger ones, projects more or less vertically in the form of a triangular spine. The aperture of the zooecium is elongate-oval and is closed by a pale membranous structure.[2] The lower extremity of the stomach is somewhat produced and mammiliform.

In the absence of statoblasts it is impossible to fix the identity of the species with certainty. The species, if not identical with *P. (Afrindella) tanganyikae*, is very closely related to it in the form and branching of the zooaria.

The ectocyst, which is densely covered mostly with the remains of diatoms, presents a noteworthy feature, and this is presumably to be associated with the fact that the lake teems with these organisms which on death settle on the bottom debris.

The distribution of *P. tanganyikae* is somewhat peculiar. It was first described from Lake Tanganyika in Central Africa, and has since been recorded in India from the W. Ghats in the Bombay Presidency, from the Kumaon Lakes in the lower ranges of the Western Himalayas and from Orissa in the Peninsular area. The discovery of the species

[1] Rousselet, *Proc. Zool. Soc. London*, (i), p. 252, pl. xiv, figs. 1-4 (1907).

[2] This structure is fully described and figured by Annandale in *Rec. Ind. Mus.* VII, pp. 140-142 (1912).

in Burma from which, so far as I am aware, there has been no previous record, is of some interest. Though from its known records the species seems to have a discontinuous distribution it is probable that on a careful and extended survey of freshwater areas in the Indian Empire the species will be found to have a much wider range.

Lophopodella carteri (Hyatt).

1911. *Lophopodella carteri*, Annandale, *Faun. Brit. Ind. Freshwater Sponges, etc.*, p. 232.
1919. *Lophopodella carteri*, Annandale, *Rec. Ind. Mus.*, XVIII, p. 96.

A small young colony found on the thick leaf of a reed in the marginal zone of the lake near Nyaungbin is to be referred to this species. No statoblasts were found in any part of the colony, the polypides of which were preserved in a beautiful expanded condition. The ectocyst is hyaline and forms a trumpet-shaped structure, to the narrow end of which the polypide is attached. When fully expanded the polypide projects considerably above the flat side of the ' trumpet ', its proximal part being protected by the entire ectocyst. In the contracted state the polypide lies well within the trumpet-shaped ectocyst. A thin membrane, having a cellular structure, seems to invest the ectocyst and the polypide. The cells are regularly arranged, and more or less spherical, and have their individual outline distinct over the whole membrane.

The distribution of the species in the Indian Empire is not fully known. The species has been recorded from Seistan in Eastern Persia, from the Bombay Presidency and the Central Provinces and from the Kumaon Lakes in the Western Himalayas. It is not known from other freshwater lakes, such as the Loktak Lake in the Manipur State of Assam or from the Inle Lake of the S. Shan States in Burma, the fauna of which has been investigated in recent years. The present record of the species from the Indawgyi Lake in Upper Burma is, therefore, of considerable interest. The range of the species extends from East Africa to Japan.