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**Report of the British Association for the Advancement of
Science**

London,

<https://www.biodiversitylibrary.org/bibliography/2276>

72nd Meeting (1902): <https://www.biodiversitylibrary.org/item/93735>

Page(s): Page 652, Page 653

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The temporal touches the *jugal* in *Hylobates mülleri*, and thus shuts off the parietal, which also touches the jugals from the *sphenoid*.

The *same* arrangement *almost* takes place in *Tarsius spectrum*.

The *Cynomolgus*, mentioned above as not having a parieto-sphenoidal suture, has two small Wormian bones in the naso-frontal fissure. In the *Homo* above alluded to the temporo-frontal suture is 20 mm. long, and the sphenoido-frontal 11 mm. There are Wormian bones in the lambdoidal suture.

There are Wormian bones in the naso-frontal suture of the *leucoprymnus* referred to above, where the premaxillary bones almost reach the frontals.

The parietal and sphenoid touch the jugal in *Hapale jacchus* and some other American monkeys.

This arrangement arises from the forward extension of the parietal, excluding the frontal from the sphenoid, and then the forward extension of the temporal may exclude both frontal and parietal from the sphenoid.

9. *Notes on the Habits of the Onuphididæ (Polychæta) and on the Internal Structures with which they Fortify their Homes.* By ARNOLD T. WATSON, F.L.S.

The Onuphididæ are closely allied to the Eunicidæ, from which they are distinguished, amongst other things, by their always dwelling in deep water, whilst the Eunicidæ are often found between tide-marks.

Observation of the British forms, *Hyalinæcia tubicola* and *Onuphis conchilega*, while living in captivity, shows them to be errant worms, moving from place to place and carrying their tubes with them. These tubes are open at both ends, but the animal protects itself from the attack of enemies by constructing within, at either end, membranous valves, on the principle of the valves in a vein, the open ends of the pockets of which are directed outwards, so that by inrush of the sea-water the valves are automatically closed on retreat of the inmate.

In the quill-like, chitinous, transparent tube of *Hyalinæcia* the valves existing, or which have existed, are indicated by the ornamental V-shaped or zig-zag markings.

The valves of *Onuphis conchilega* are much more delicate in structure, but nevertheless are distinctly demonstrable in the internal membranous tube, on removing with a weak acid the shelly covering which forms the scabbard-like sheath.

Very perfect valves of the kind described were also found in the tube of *Nothria pycnobranchiata*, obtained by the 'Challenger' Expedition from a depth of 2,225 fathoms.

The habits of animals living at so great a depth can, of course, only be conjectured, but there is reason to think that, like the British species, these members of the family may be errant worms.

The paper was illustrated with lantern slides, and will be published in full by the Liverpool Biological Society.

10. *On an Acelous Turbellarian inhabiting the common Heart Urchin.*
By R. T. LEIPER.

The turbellarian described in this paper was found by me in the accessory canal of about 8 per cent. of the specimens of *Echinocardium cordatum* occurring at Millport, N.B., several examples being usually present in the same host.

It is whitish and moderately translucent in appearance, leaf-like in shape, obovate when contracted, lanceolate when extended, the blunt end being anterior.

When fully extended it measures in length 2.5 mm.; in breadth, transversely, 0.6 mm.; dorsiventrally, 0.2 mm.

The microscopical structure is described in some detail, an interesting and

characteristic feature being the presence of a large digestive vacuole occupying the anterior middle fourth of the body, and lying above but not in immediate continuity with the mouth.

No vagina or spermatheca is present, the ova being extruded by the rupture of the cuticle at a short distance in front of the penis owing to an ever-increasing growth pressure.

In some points this turbellarian resembles *Böhmigia*; it possesses, however, no female accessoria; a similar absence obtains in the genus *Haplodiscus*, from which also it differs in the following not unimportant details:—

- (1) Shape.
- (2) Parasitic habitat.
- (3) Mouth situated in the anterior fourth.
- (4) Paired testes in the lateral parts of the body.
- (5) No defined vasa deferentia.
- (6) Penis with chitinous knob-like armature.
- (7) Presence of a large dorsal vacuole.

Attention is drawn to the present classification of the Acœla. It is suggested that the family *Proporidae*, comprising all Acœla with one genital opening, be subdivided into two sub-families.

(1) *Proporinae*, including the genera (a) *Proporus*, (b) *Monoporus*, (c) *Böhmigia*, *i.e.*, those Acœla with a common genital atrium.

(2) *Avagininae*, consisting of (a) *Haplodiscus* and (b) the genus presently described, these having male accessoria only.

TUESDAY, SEPTEMBER 16.

The following Papers were read:—

1. *Some Remarks on the Atlantis Problem.* By R. F. SCHARFF, Ph.D.

Since the dawn of early history the question of the existence of a continent beyond the 'pillars of Hercules' has occupied the mind of man. Our very earliest records of this mythical land were derived from a narrative which has been handed down to us by Plato. According to it, Solon is said to have visited Sais in Egypt, and there to have heard from priests of the ancient 'Empire of Atlantis' and of its overthrow by a convulsion of Nature. This Atlantis was then spoken of as a vast land lying beyond what we now call the Straits of Gibraltar, and it is supposed to have been inhabited by a mighty race of people. Plato's story has called forth quite a flood of literature, not only in ancient times; even within the last score of years many pamphlets and books have been published dealing with this attractive problem. Some authors have sought to discredit the veracity of Plato's assertions, while several, and among them Humboldt and Sir Daniel Wilson, were of opinion that the tale rests on some historic basis. Others again have utilised the original story and connected it with their own ideas of a land-bridge stretching right across the Atlantic from Europe to America.

The Atlantis problem, however, was only raised to scientific importance when modern research revealed the fact that the living as well as the extinct flora and fauna of Europe have quite a number of types in common with North America. Unger was the first to put forward the view, from a purely scientific reasoning, that the Atlantic Islands, that is to say, the Azores, Madeira, and Canary Islands, formed part of a land-connection which stretched right across the Atlantic and still preserved some of the plants which invaded our Continent from the New World. Heer hailed this hypothesis with delight, while Andrew Murray adopted it in a somewhat modified form. Edward Forbes also occupied his fertile mind with the problem, but could not convince himself that the vast land which