

importance, which indeed will form a continuation or supplement nearly allied to that of Schimper. It is in the full expectation of a part of Kotschy's collections being received at Esslingen from this traveller in the course of the present year that the directors of the Society feel themselves warranted in requesting new members to subscribe for shares from so low as 30 to 60 florins (3*l.* 3*s.* to 6*l.* 6*s.* sterling) or upwards, according to the portion they may wish to secure. The subscription price is fixed at the same as Schimper's was, viz. 15 florins (1*l.* 11*s.* 6*d.* sterling) per 100 species.

Third, Welwitsch, who has been despatched to the Azores and Cape de Verde islands, and whose collections (including the plants he gathered during his detainment at Lisbon, and which are themselves far from inconsiderable) are shortly expected to arrive. A single share for this expedition is stated at 24 florins.

* * The Society still have at disposal to Non subscribers a few collections from the former expeditions, viz. Georgio-Caucasian, North American, and Egyptio-Arabian, at from 15 to 25 florins per century.

9, Queen-street, Soho-square, London,
May 1st, 1840.

NOTE ON *ARGULUS FOLIACEUS*, JURINE. BY WM. THOMPSON,
VICE-PRES. NAT. HIST. SOC. OF BELFAST.

Belfast, Oct. 29, 1838.—In our market today I had the pleasure of detecting one of these very interesting and handsome parasites attached to the dorsal fin of a *Salmo Trutta*, about a foot in length. The *Argulus* is $3\frac{1}{2}$ lines long, is a female, and in addition to the ova exhibits at the base of the tail the dark green spots ("noirs," Desm. Consid. Gen. Crust., p. 332), which are considered to mark this sex. Although the fish to which it was attached had been for some hours out of the water, the *Argulus* held so firmly by its two disks that I had some difficulty in detaching it without injury. For about ten minutes it was wrapped in a piece of dry paper, and then placed in a vessel of water in which salt had been dissolved until it was to the taste like strong sea-water*. This was no sooner done, than my pretty captive, after drawing her last pair of feet together several times†, thus calling to mind the common house

* This was done in consequence of my having been told that the fish was taken in the sea; the stomach, however, contained the remains of fresh-water insects (according to my friend A. H. Haliday, Esq., to whose inspection they were submitted), which possibly might have been washed into the sea and there obtained, but this is by no means probable.

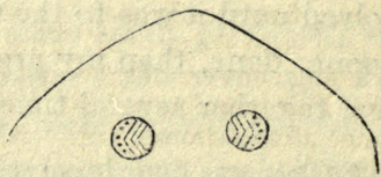
† I observed this repeatedly done afterwards—they seem to be rubbed against the caudal plates.

fly, struck out her oars, and thereby was rapidly impelled through the fluid.

The figures of Desmarest (tab. 50.) and Yarrell (Brit. Fish., vol. ii. p. 399.) are very characteristic of this species, but the great beauty exhibited in the specimen before me is at the same time not shown, perhaps in consequence of the upper side of the female not being represented—this consists in its being closely spotted with very dark green along the central part of the body for two-thirds posteriorly commencing a little above the ovary in the form of a head, and extending to the posterior portion; the rest of the upper side of the body being of a very pale yellowish green hue and semi-transparent as described, the part thus spotted is well defined, and is strikingly of the form of a coleopterous insect, which the *Argulus* in another point of view resembles, when the two sides of the greenishly transparent “boucliers” are thrown a little apart, as we see the elytra of the insect. I was further reminded of the resemblance when attempting to remove it, as in holding firmly by the suckers, the body was drawn in, and the “boucliers” elevated quite above it. Its motion through the water seems equally rapid whether it be on the upper or under side, or swimming retrally—it frequently moved along the surface with its back downwards, and was wholly immersed except the suckers, which were thrown either on a line with the water or quite above it, and thus would the animal occasionally remain quiescent for a short period.

The constant motion of these organs (visible to the naked eye) in addition to the rapid play of the feet, impart much life to the appearance of the *Argulus*, and present not the same aspect for two continuous seconds of time, whether the body be at rest or otherwise. They—i. e. the marginal row of minute suckers, which appear as a dark line round the disk in figures of the species—are frequently drawn together to the centre of the disk, exhibiting a dark point not larger than the eye.

The eye itself, under the lens or microscope, exhibits constant motion, and even to our unassisted vision its red colour—that of the lady bird, *Coccinella septempunctata*—is apparent; when magnified it looks black where the lines and dots are, red elsewhere.



After having been about four or five hours in the salt water, and displaying its wonted activity to the last, the specimen was lost during my absence from the room. I had intended to observe how long it—a freshwater species—would live in salt water, but though foiled

in this, have thought these notes, made with the living animal before me, might perhaps be worth the room they occupy, more especially as the *Argulus* seems to be very little known as a British species. From what has been stated it would seem to be very tenacious of life. The individual here treated of is the second Irish one I have seen; the other was, when swimming freely in Lough Neagh, taken by Mr. Hyndman in the autumn a few years since. Like the present specimen, it displayed a mass of large ova.

INFUSORIAL ANIMALCULES IN RED SNOW.

Mr. Shuttleworth relates, that being occupied in the examination of some red snow that fell at the Grimsel, and expecting to see only inanimate globules of *Protococcus nivalis*, he was astonished to find that it was composed of organized bodies distinct in nature and form, partly vegetable, but the greater number endowed with the liveliest powers of motion, and belonging to the animal kingdom. Among these he has named one species *Astasia* [Ehrenb.] *nivalis*, and another *Gyges sanguineus*.—*Bibl. Univ.*

METEOROLOGICAL OBSERVATIONS FOR MARCH, 1840.

Chiswick.—March 1, 2. Cold and dry. 3. Cloudy. 4. Bleak and cold. 5. Frosty: cold and dry: sharp frost at night. 6, 7. Frosty haze: fine. 8, 9. Clear and frosty: fine. 10. Very fine. 11. Drizzly. 12. Cloudy. 13. Hazy: fine. 14. Overcast: very fine. 15. Slight rain. 16. Fine but cold. 17. Clear. 18. Overcast. 19, 20. Cloudy and cold: clear. 21. Very clear. 22. Overcast. 23. Fine but cold. 24, 25. Clear and cold. 26—28. Cloudy and cold. 29, 30. Cloudy and fine. 31. Drizzly.

It may be observed that the quantity of rain in this month was less than 3-10ths of an inch. The barometer stood remarkably high and in general very steady.

Boston.—March 1—3. Fine. 4. Stormy. 5—8. Fine. 9. Cloudy. 10. Fine. 11, 12. Cloudy. 13. Fine. 14. Rain. 15. Cloudy: rain P.M. 16, 17. Cloudy. 18. Rain: rain P.M. 19, 20. Cloudy. 21. Fine: snow early A.M. 22. Cloudy: rain P.M. 23. Cloudy: snow early A.M. 24. Hail: snow early A.M. 25. Fine: snow early A.M. 26. Fine: snow P.M. 27, 28. Cloudy. 29. Cloudy: rain P.M. 30, 31. Cloudy.

Applegarth Manse, Dumfries-shire.—March 1, 2. Fine clear day: frosty. 3. The same: getting cloudy P.M. 4, 5. The same: still freezing. 6. Remarkably fine day: gentle frost. 7—9. The same: hoar frost A.M. 10. The same, but threatening change. 11. The same, but cloudy: no frost. 12. The same: continuing cloudy: no frost. 13. Dry and boisterous: cloudy. 14. Dry but cloudy. 15. Fine day: rain A.M. 16. Slight rain morning: cleared up. 17. Fine: frosty early A.M. 18. Fine: the same. 19. Fine: without frost. 20. Fine: hoar frost. 21. Fine: strong frost. 22. Fine: getting cloudy. 23. Passing showers of snow and hail: frosty. 24, 25. The same: very cold: frosty. 26. Fair but cloudy. 27. Fine but dull. 28. Remarkably fine day. 29. The same after a shower A.M. 30. Wet morning: drizzly all day. 31. Occasional showers.

Sun shone out 29 days. Rain fell 5 days. Snow and hail 1 day. Frost and hoar frost 17 days.

Wind north $1\frac{1}{2}$ day. North-east $8\frac{1}{2}$ days. East 2 days. South 4 days. South-west 3 days. West 2 days. North-west 6 days. North-north-west 1 day. North-north-east 1 day. Variable 2 days.

Calm 15 days. Moderate 9 days. Brisk 5 days. Strong breeze 2 days.



1840. "Note on Argulus foliaceus, Jurine." *Annals of natural history* 5, 221–223.
<https://doi.org/10.1080/00222934009496811>.

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