

If the eggs of a wild duck are placed with those of a tame one under a hen¹ to be hatched, the ducklings from the former, on the very day they leave the egg, will immediately endeavour to hide themselves, or take to the water if there is any near, should any person approach, whilst the young from the tame duck's eggs will show little or no alarm, indicating in both cases a clear instance of instinct or "inherited memory."

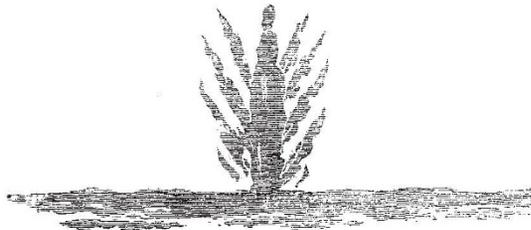
4, Addison Gardens, July 16

JOHN RAE

Clouds

THE following notes of a cloud action, which, so far as I am aware, is not common, may be considered worthy of record.

The occurrence took place at Chatham at about 1 p.m. on Sunday the 1st inst., and attracted attention more particularly from its following a week of strong electrical disturbance in the neighbourhood, accompanied by two fatal results.



At the hour named above, and apparently at a considerable height, certain semi-transparent clouds arranged themselves in thin columns at right angles to each other, some of the columns giving off shoots throughout their length, in shape somewhat resembling blades of grass. Whenever fleecy clouds passed between the foregoing formation and the earth, they were quickly



broken up into small, attenuated components which gradually reunited on getting out of the influence; but on one occasion a very small cloud thus acted upon set itself in the form of a right angle also and remained so.

R. Y. ARMSTRONG

July 7

Extraordinary Flight of Dragon-Flies

AN English gentleman writing from Malmö, in Sweden, on July 3, says:—

"On Sunday, June 24, we had an extraordinary flight of the *Trollslända* (*Libellula quadrimaculata*, Linn.), . . . a brown dragon-fly an inch and five-eighths long and three inches from tip to tip of the wings. . . . They passed over or through the town and neighbourhood for about half an hour in the afternoon. The next day about 1 o'clock they reappeared for more than an hour, but on Tuesday the 26th, at 7.30 a.m., they again began in millions, and notwithstanding the wind had shifted to the south during the night, they held the same course from north-west by west, heading south-east by east. The streets, shipping, and every place were full of them. They did not fly very high, and seemed to avoid going into open doors and windows. Some hundred or so alighted on the gooseberry bushes, apple and pear trees in this garden, but never touched the fruit. I observed one sitting on the dead tip of an apple-twig, and I pushed it off with my stick thirteen times, the insect returning each time after flying away about five or six yards. . . . The flight ended that night about 8 p.m., having been incessant for more than twelve hours. On the 27th they appeared again about noon, flying the same course, but in much reduced forces. Each day since I have seen a few, but very few. . . . The papers say they were observed in all southern and Central Sweden, and in many places in Denmark, and they

¹ I mention a hen as foster-mother because the ducklings can have no instinctive knowledge of any note of alarm or warning she may give.

swarmed about the ships in the Sound. With their disappearance came the hot weather."

The foregoing extracts seem to me worthy of record in the pages of NATURE, and I accordingly forward them with that view.

ALFRED NEWTON

Magdalene College, Cambridge, July 11

Sheet Lightning

WE had here last night a violent rain and lightning storm without thunder. The lightning was very vivid and incessant, and seemed nearly overhead, but there was no sound but that of rain. We are near the crest of the Apennines, and the storm seemed to have gathered along that crest, having been preceded by a furious sirocco suddenly supervening on a north-west wind.

I have twice before witnessed the same phenomenon of electrical storms with vivid lightning overhead and no thunder. Both instances occurred on the abrupt edge of the Montenegrin highlands, where they fall off into the low, wide plains of the Scutari district, and where thunderstorms are more common than in any other country I have ever visited. On these nights we were encamped on the edge of the hill country, on broken rocky land, with much low scrubby vegetation, but the lightning was so incessant and vivid that we were able to walk about, choosing our way amongst the stones and shrubs as readily as by daylight, the intervals between the flashes being, I should judge, never more than a minute, while much of the time they seemed absolutely continuous, the landscape being visible in all details under a diffused violet light. Looking overhead the movements of the lightning were easily discernible, the locality of the discharges varying from one part of the vault to another in a manner which it was impossible to confound with the reflection of lightning from a distance. Like the storm of last night those were followed by copious rain, but not a single peal of thunder was heard during the whole night.

W. G. STILLMAN

Cutigliano, Pistoiese Apennines, July 11

ALGÆ

DR. BERTHOLD tells us in his preface that he was induced by his discovery of the processes of fructification in *Erythrotrichia obscura* to study the small but interesting group of the Bangiaceæ, in the knowledge of which so many gaps still existed. The Zoological Station at Naples afforded him every facility for carrying on his researches on these algæ, not only in what may be called their wild state, but also under cultivation. To these advantages may be added, although in an inferior degree, that of the use of a great number of dried specimens. The results of his two years' study are embodied in the work mentioned at the head of this notice.

The small group of algæ, now included by Dr. Berthold under the general name of Bangiaceæ, consists of the three genera, *Bangia*, *Porphyra*, and *Erythrotrichia*; under the last genus are included *Bangia ciliaris*, and *B. ceramicola* of Harvey ("Phyc. Brit.," Pls. cccxxii. and cccxvii.). To these genera may probably be added *Goniotrichum*.

The exact systematic position of these algæ has, from the fact that little was known of their fructification, been hitherto uncertain. While their red colour induced Cohn, Thuret, and Bornet to place them with the Florideæ; other algologists, among whom may be mentioned J. Agardh, Kützing, Harvey, and Zanardini, grounding their opinion on the structure of the vegetative thallus, have classed them with the Chlorosperms.

For the first information relative to the fructification of the Bangiaceæ, we are indebted to Derbès and Solier, who had discovered in *Bangia fusco-purpurea* and *B. lutea* two different kinds of fructification, namely, the "common spores" and antheridia. Then followed the researches of Nägeli, Thuret, and Janczewski on *Porphyra*. Janczewski had actually discovered and described the carpospores of *Porphyra*, to which he gave the name of

¹ "Die Bangiaceen des Golfes von Neapel." Eine Monographie von Dr. G. Berthold. Fauna und Flora des Golfes von Neapel. (Leipzig: Wilhelm Engelmann, 1882.)