

fertilised, and experiments of a similar nature carried out on wild plants *in situ* in June, 1903, and also June, 1904.

*In no case could I get a flower to fertilise itself, though crossed flowers produced abundant seed under both conditions.* A correspondent in Edinburgh, experimenting upon primroses for quite another purpose, confirms my experience in this matter.

The author of the above-mentioned work has in my opinion fallen into the common error of deducing a function from a structure without recourse to the experimental method, a mode of procedure which has, I believe, led him into grave error.

E. A. BUNYARD.

The Bungalow, Allington, Maidstone, August 8.

#### An Optical Phenomenon.

MR. HILLIG's letter in NATURE of August 18 (p. 366) reminds me of a somewhat similar phenomenon which I observed last May when using a rotating cubical mirror and sensitive flame.

When the mirror was rotated by hand at moderate speed the upper and lower edges of the band of light seen in the mirror presented exactly the appearance of a faint spectrum, red being outside and pale green and blue inside. The central portion of the band was colourless.

The appearance was most distinct when the flame was influenced by a sound.

I repeated the experiment to-day with the same result.

GEORGE W. WALKER.

Physical Laboratory, The University, Glasgow,  
August 19.

#### Traction of Carriages.

IN further answer to your correspondent, p. 270, in passing along a road the wheels of a carriage encounter many small obstacles and inequalities over which they have to rise. In doing so the centre of gravity of the load (which is always higher than the axles) is raised to a greater vertical height when the axles are far apart than when they are close together. The work done in the former case is, therefore, greater than in the latter, by an amount the magnitude of which is proportional to the difference between the versed sines of the angles through which the carriage is tilted in each case respectively. The same argument applies in regard to lateral oscillations of the centre of gravity with the corollary that the narrower the gauge the more easily is the carriage propelled or drawn.

There may also be some question as to the influence of the different rates of retardation and acceleration of the centre of gravity in each case.

Cardiff, August 1.

W. GALLOWAY.

#### Indian Rhynchota.

IN the issue of NATURE of August 11 (p. 341) there appeared a notice of my second volume on "Indian Rhynchota" (Blanford series), in which I read, "the two last families of the Gymnocerata (Hebridæ and Hydrometridæ) are left over to be included with the Cryptocerata" in the third volume.

This is an error. They have already appeared in their proper location, vol. ii. pp. 167 and 168-192.

W. L. DISTANT.

Steine House, Selhurst Road, South Norwood, S.E.

[The reviewer regrets the oversight which Mr. Distant has pointed out.—ED.]

#### The Earliest Mention of Hydrodictyon.

TWAN CHING-SHIH (ob. 863), in his "Yü-yang-tsah-tsu," Japanese edition, 1697, tom. xix., fol. 12, a, writes:—

"The *Shwui-mung-tsiau* (literally, Water-net-alga) grew in Kun-ming-chi [an artificial lake formed by the order] of the Emperor Wu-ti of the Han dynasty [reigned 140-87 B.C.]. Its branches, spreading sidewise, now come out of water slantly. It was eight to nine feet long and so closely resembling the meshes of a net that the ducks could not come out of it when got therein. Hence the name."

NO. 1817, VOL. 70]

This is likely to be an exaggerated Chinese account of the now well known water-net (*Hydrodictyon utriculatum*, Roth.). In this part, when a paddy-field has its water drained off, we meet frequently this alga, "spreading sidewise, now coming out of the remaining water slantly," although such a gigantic dimension as "eight to nine feet" is totally out of the question. Perhaps this is the earliest record of the alga.

KUMAGUSU MINAKATA.

Mount Nachi, Kii, Japan.

#### MARCONI WEATHER TELEGRAMS.

METEOROLOGISTS have for a long time felt that they have practically come to the limit of their resources in the matter of weather forecasting, so far as the weather changes in the British Isles are concerned, except, perhaps, if finance allowed that telegrams might be received at a later hour than 6 p.m. This later information might avoid the possibility of a storm system advancing towards our western coasts slipping in unobserved between the present hours of observation, 6 p.m. and 8 a.m., without proper intimation of its approach by the fall of the barometer and the backing of the wind being duly notified. Occasionally some of our worst storms spread over us in this way, and the forecaster, who has been unable to foresee the incoming disturbance by aid of the 6 p.m. weather telegrams, finds to his dismay when viewing the next morning's weather information that the full violence of the storm is upon us, for which no storm warnings have been issued. In this way, from time to time, the central area of an important storm is well over the United Kingdom before our Weather Office is aware of its existence.

Wireless telegraphy promises to supply the missing link in the connection of our shore weather system with that over the ocean to the westward of us, and the present praiseworthy effort on the part of the *Daily Telegraph* seems likely to prove, even now with the restricted powers of the Marconi system, that useful information can be obtained. The messages at present are transmitted only about 100 miles from land, but the scheme which has been most ably inaugurated has provided that, in addition to the latest weather report when approaching our shores, there should also be a report of the weather experienced some time previous, so that it is not merely an isolated observation with which we have to deal, but a fair knowledge of the weather from about mid-Atlantic is secured. This information is at times supplied by two or three vessels, so that synchronous observations are obtainable, and it will easily be understood that with further development of the system an approximate synoptic and synchronous map of the Atlantic may be produced. The storm areas very frequently follow a course almost due east when approaching our islands, but often when in fair proximity to our coasts they trend to the north-east, and any help in enabling a true estimate to be formed of the storm's path will be of the greatest possible advantage to the forecaster. Information with settled conditions will be of great value, since it is expected that forecasts should show with some certainty the advent or continuance of settled weather. When an area of high barometer readings is situated to the westward of our shores, and is willing to give way, it affords an indication of the early approach of storm systems, with disturbed weather, from the open ocean, while if the anticyclone maintains its ground the approaching disturbance will be fended off and made to follow a course more to the north-east, and may be taken altogether beyond the limits of the United Kingdom.

For some time past the Meteorological Office has had in hand the charting of the weather over the North