

Donax (sp. nov.?).

Corbula inaequalis Say.

Divaricella dentata Wood.

Mangilia sp. (cf. *cerina* K. & S.).

Natica sp. fragm.

Terebra (*Oxymoris*) var. *indenta* Dall—fragm.

Anachis sp. fragm.

Pecten sp. fragm.

Spine of *Cidaris*? fragm.

These are almost certainly upper Miocene shells of the same age as those of the Galveston well, reported on by Professor Harris.

As the bed from which these shells were gotten is between the upper and lower oil sands, and as there is no appreciable difference in the character of the sediments above and below, including the lower oil horizon, it would seem most probable that the age of this oil pool is the Upper or Deep Well Miocene of Harris.

It is interesting to note that this is the first locality in Texas outside Galveston Island at which these fossils have been found.

E. T. DUMBLE.

CURRENT NOTES ON METEOROLOGY.

TEMPERATURE IN CYCLONES AND ANTICYCLONES.

It is known to readers of these 'Current Notes on Meteorology' that the temperatures obtained by means of kites in cyclones and anticyclones at Blue Hill Observatory do not agree with the results obtained by Hann, Teisserenc de Bort and others in Europe. In the November number of the *Meteorologische Zeitschrift*, Hann discusses a recent paper by H. H. Clayton, which appeared in the *Beiträge zur Physik der freien Atmosphäre*, No. 3, and was recently briefly summarized in these columns. Hann points out the difference in the method of treatment adopted by Clayton on the one hand, and by Teisserenc de Bort and himself on the other, and notes that in general in dynamic meteorology barometric maxima and minima do not mean the crests and troughs of pressure waves at a given place, but the regions from which the pressure (at least as a whole) decreases in all directions (maxima) or increases (minima). Hann and Teisserenc de Bort, in their studies, used the daily weather maps as the basis, and

not the barogram at a single station, for they are of opinion that the vertical distribution of temperature above a single station at those times when the trough or the crest of a pressure wave passes over it has no clearly defined physical significance. "This method has led to the conclusion (observations on mountains and those obtained in the free air by means of balloons are in agreement on this point) that, at least in winter, the mass of air in cyclones averages colder than that in anticyclones (as Hann first pointed out in April, 1890). This does not imply that there may not also be smaller cyclonic whirls, especially in summer, which are relatively warm. The thermal conditions of tropical cyclones are still uncertain, and it would be a mistake to attempt to refer all atmospheric whirls back to the same cause."

LIFTING POWER OF ASCENDING AIR CURRENTS.

In the *Monthly Weather Review* for September, 1905 (issued November 29), H. H. Clayton cites some cases of the lifting power of ascending air currents in quiet summer weather. On August 6, 1894, at Blue Hill Observatory, a kite was caught in an ascending current about fifty feet above the top of the hill, and rose rapidly toward the zenith, circling as it rose. A large cumulus cloud was passing at the time, and the kite followed this cloud toward the east, until, being drawn out of the ascending current, the kite fell rapidly to the ground. On September 8 last, as reported by John Ritchie, Jr., a piece of paraffine paper was carried nearly vertically upward from the top of Mt. Chocorua, N. H., reaching a height of at least 1,000 feet. There was very little wind stirring at the time, and the paper rose steadily upward, not as if blown by a gust of wind. Both kite and paper were probably lifted by ordinary ascending currents of air such as commonly exist on summer days.

CLOUDS AND HEALTH.

MAJOR CHAS. E. WOODRUFF, U. S. A., who has recently written a book on the effects of tropical light on the white race, setting forth the view that the sunlight is a very important factor in the problem of acclimatization in

the tropics, has advanced the opinion, which will seem highly revolutionary to most persons, that the low death rates in the cities on our northern Pacific coast result from the cloudiness of those places. Dr. Woodruff holds that races are colored in a way to resist the effects of too much sunlight, and that the white race is fitted, not for the most sunny latitudes, but for the least sunny ones. Further, he believes that the blonds are gradually eliminated through greater susceptibility to disease in the lighter parts of a country, while the brunettes survive, being stronger and less injuriously affected.

NOTES.

THOSE who are interested in the very ingenious cipher code used by our Weather Bureau in the transmission of its observations will find an account of 'Weather Bureau Cipher Codes,' by Professor E. B. Garriott, in the *Monthly Weather Review* for October, 1905.

PROFESSOR W. H. PICKERING has recently published a paper on 'Martian Meteorology' in the *Annals of the Harvard College Observatory*, Vol. LIII., No. VIII. In the *Monthly Weather Review* for October, 1905, Professor Cleveland Abbe gives a brief summary of the investigations on this subject.

It has been noted that when hailstones are melting away in a pail of water they end their career by giving up a large bubble of air which had evidently been enclosed, under great pressure, in the white snow at the center of the hailstones. Observations of this fact, and also of the size of the cavity that appears to contain the air and of the size of the bubble as it ascends through the water, are desired by the editor of the *Monthly Weather Review*, Washington, D. C.

Das Wetter for December, 1905, contains the results of an investigation of the value of radiation from the sky, carried out by W. Gallenkamp by means of an apparatus designed by himself for this work. This subject has received but little attention as yet.

R. DEC. WARD.

ENTOMOLOGICAL NOTES.

ENDERLEIN has found a curious wingless fly in Germany, which has much resemblance both in shape and movements to a Thrips.¹ He refers it to the Bibionidæ. It has halteres, and rather large long legs; only one female specimen is known, and doubtless the male will be winged.

MR. S. GRAENICHER has investigated the larval habits of several parasitic bees and obtained some highly interesting results.² In the three cases of *Stelis* with *Alcidamea*, *Cœlixys* with *Megachile*, and *Epeolus* with *Melissodes* he finds that the parasitic larva is provided with sharp mandibles and an aggressive temperament, so that it attacks any larva it meets in the nest, even of its own kind. In some cases the larva loses its sharp jaws at a later moult, and thereafter feeds on the honey and pollen stored by the host-bee. The larva of the host-bee has blunt jaws, and though often larger than its enemy, never attacks it.

MR. CARL HARTMAN is the author of an interesting paper on the habits of some Texan solitary wasps.³ He has watched, more or less thoroughly, the habits of twenty-eight species, belonging to various families. Several species are shown to vary in the method of making and closing the nest, and in stinging and carrying their prey. Some species are extremely fastidious in choice of prey, but *Microbembex* will take any insect, dead or alive, to provision her nest. He considers that the primary purpose of the sting is to paralyze the prey, but in some cases it also kills them. In finding their nests he believes that these wasps are guided by sight, and a memory of landmarks; and he adduces some evidence to show that variation in habits is proportionate to the physical

¹ 'Thripsomorpha paludicola, n. gen. n. sp., eine neue deutsche flügellose Fliege,' *Zool. Jahrbücher*, Abt. Syst., XXI., pp. 447-450, 1 pl., 4 figs., 1905.

² 'Some Observations on the Life History and Habits of Parasitic Bees,' *Bull. Wisc. Nat. Hist. Soc.*, III., pp. 153-167, 1 pl., 1905.

³ 'Observations on the Habits of Some Solitary Wasps of Texas,' *Bull. Univ. Texas*, No. 65, pp. 72, 4 pls., 1905.