on Zee duiivel, Diabolus marinus Willughby, Hist. Pisc., App., 1686, p. 5, plate 9, fig. 3; no locality; pre-linnæan). [Nonbinomial.]

1801. (*Raja.*) *Manatia* Schneider, Syst. Ichth., p. 364 (based on La Raie Manatia, Lacépède, Hist. Nat. Poiss., I., 1798, p. 160; les rivages de l'Amérique voisins de l'equateur; nonbinomial).

1824. *C.(ephalopterus) Vampyrus* Mitchell, Ann. Lyc. Nat. Hist. New York, I., p. 23, plate 2, fig. 1; "near the entrance of Delaware bay, by the crew of a smack. They had heard that creatures of extraordinary form and size, were frequent in the tract situated off Capes May and Henlopen, during the warm season."

1824. *C.(ephaloptera) gigantea* Le Sueur Journ. Acad. Nat. Sci. Phila., IV., p. 115, plate 6, figs. 1–4; taken near the entrance of the Delaware (Coll. Philadelphia Museum).

A large example of this species was taken in the sea, about a mile from shore, at Stone Harbor, N. J., September 1, 1902. It was taken in a pound net with the harpoon by some fishermen, and then dragged ashore behind a whaleboat. When in the net it behaved very quietly until harpooned, after which it created a great disturbance. It soon died, however, when brought on the beach. Nothing was preserved except one of the eyes and a small piece of the skin. The former measures about two and one eighth inches in diameter, and its pupil about eleven sixteenths of an inch. These are contained in the collections of the Academy.

As Walbaum is nonbinomial, the next available name is that proposed by Schneider. The name in current use, *Manta birostris,* will thus be superseded by *Manta manatia.*

SCOMBRIDÆ.

2. THUNNIS THYNNUS (Linnæus).

1758. (*Scomber.*) *Thynnus* Linnæus, Syst. Nat., Ed. X., p. 297; inter Tropicos, in Pelago (based on *Scomber pinnulis,* etc., Artedi, Ichth., 1738, p. 31; no locality, evidently the great tunny of Europe).

I examined a large example, a little over eight feet in length, which was said to have weighed 700 pounds. It was brought to the Philadelphia market November 4, 1898, from near Brighton, N. J., where it was taken in the ocean. No attempt was made to use the flesh, and it remained on exhibition for several days.

CEPHALACANTHIDÆ.

3. CEPHALACANTHUS VOLITANS (Linnæus).

1758. (*Trigla.*) *volitans* Linnæus, Syst. Nat. Ed. X., p. 302; in Mari Mediterraneo, Oceano, Pelago inter tropicos, in Asia, imprimis ad Cap. b. spei, sape agitata evolans ex aqua (part; based in *Trigla capite,* etc., Artedi, Ichth., 1738, p. 44; mare Mediterraneum).

A large example of this species was taken at Holly Beach, October 11, 1902. It is now in the collection of the Academy of Natural Sciences of Philadelphia.

HENRY W. FOWLER.
ACADEMY OF NATURAL SCIENCES,
PHILADELPHIA, PA., January 17, 1903.

CURRENT NOTES ON METEOROLOGY.

BIGELOW'S BAROMETRY.

VOLUME II. of the 'Report of the Chief of the Weather Bureau for 1900–1901' is an elaborate 'Report on the Barometry of the United States, Canada and the West Indies,' prepared by Professor F. H. Bigelow. The volume numbers 1,005 quarto pages, and contains 55 tables and 39 charts. The need of some revision of the barometric observations becomes apparent when it is recalled that these observations have not hitherto been reduced to a homogeneous system by the application of all the necessary reductions. The method of reduction has also varied from time to time. Four methods of reduction have been employed before the one contained in this report. Professor Bigelow has preserved the Ferrel system of reduction, has 'added another for local abnormality, computed the effect of the vapor pressure separately from that of the free air, and discussed thoroughly the temperature argument, so that these, added to the usual free-air reduction, give the ones required for the plateau districts.' Some idea of the scope of the report may be gained

from a brief enumeration of a portion of its contents, *e. g.*, new barometric reduction tables for reductions between any two planes within the elevations from sea level to 10,000 feet; the construction of temperature gradients in latitude, longitude and altitude for all stations of the United States; the computation of the vapor tension on the sea level, the 3,500-foot and the 10,000-foot planes; the construction of charts of pressure, temperature and vapor tension for each month and the year on the three planes just mentioned; the preparation of special station tables for the practical work of reducing the observations to sea level, to the 3,500-foot plane, and the 10,000-foot plane for the daily weather maps; the compilation of tables giving the normal values of the pressures, temperatures and vapor pressures at the stations and on the three planes. The volume is one of the most important publications of the United States Weather Service since its establishment.

METEOROLOGICAL OBSERVATIONS IN BOSNIA.

In the *Meteorologische Zeitschrift* for January, Hann discusses the observations (1895–1901) made at the observatory on Bjelasnica, a mountain 2,067 meters high in Bosnia—interesting because it is situated further to the southeast than any high-level station in Europe. The pressure, as in the case of all mountains in the Temperate Zone, rises considerably from winter to summer. The winters are abnormally cold, even as compared with the mountain stations in somewhat higher latitudes, the explanation undoubtedly being that Bjelasnica lies on the south or southeast of the winter barometric maximum over the Alps, and consequently its winds are north, northeast or east. The frequent inversions of temperature, and the bright dry days, which characterize the Alps in winter, and help so much to produce the remarkable winter climate of many of the higher Alpine stations, are conspicuous by their absence on Bjelasnica. Very remarkable frost formations are observed in winter, rivaling those of Ben Nevis and the Brocken, which have often been described and photographed. On February 20, 1902, for example, the frost needles reached a maximum length of 2.8 meters, after a growth of three days with light southerly winds; a mean temperature of 26°.6, and a mean relative humidity of 93 per cent. Several needles over three meters long broke off partly by their own weight, and partly because of the wind. To the neighborhood of the Adriatic Sea these extraordinary frost formations are due, as, in the case of the Brocken and of Ben Nevis, they are due to the proximity of the Atlantic Ocean.

HIGH WINDS ON THE PACIFIC COAST.

High winds are not commonly associated with Pacific Coast meteorology. Hence an account of some high-wind records on that coast, in the Annual Report of the California *Climate and Crops*, is of interest. These records were made at the new Weather Bureau station at Point Reyes Light (lat. 38° 12′ N., long. 122° 51′ W.). On February 23–25, 1902, during a 'severe southeast disturbance' along the coast of California, velocities up to 100 miles an hour were observed. On March 1 the wind blew for a few minutes at the rate of 107 miles an hour. Between May 15 and 20, 1902, with a marked depression over the Mexican boundary and the valley of the Colorado, the maximum wind velocity was at the rate of 110 miles an hour.

R. DeC. Ward.

SCIENTIFIC POSITIONS UNDER THE GOVERNMENT.

The civil service commission announces a number of examinations for positions in the scientific service of the government. On April 21 and 22, there will be an examination for the position of aid in the Coast and Geodetic Survey, the age limit being from 18 to 25 years, and the salary $750 and traveling expenses. There are twelve vacancies to be filled by this examination.

On May 5 there is an examination for the position of computer for nutrition investigations in the Office of Experiment Stations, at a salary ranging from $720 to $1,000.