

on that day, when we were in latitude $37^{\circ} 32'$ north, longitude $51^{\circ} 26'$ west of Greenwich. At that hour the barometer fell to 29.33; and the wind, which had been in the S.E., suddenly veered round to the S.W. and W. It increased in intensity very fast, and in an hour was blowing a whole gale, fully 70 knots an hour. The direction of the wind during this change was successively S.E., S.S.W., S.W., W., N.W., and N.N.W., and during the next twenty-four hours it was shifting back and forth from S.W. to N.N.W., with frequent squalls of hail and rain and a very heavy sea. The gale subsided the afternoon of the 24th, and the wind subsequent to the disturbance was quite steadily from the N.N.W.

The weather continued to be cloudy and squally, with frequent hail and rain and heavy sea; the barometer continued very low, and the wind strong from the N.N.W. and W.N.W., until the 27th, when the wind veered to the W. and S.W., and remained in that quarter until the Azores were passed.

Early on the 1st inst. the wind shifted to the S.E. and E., with strong and heavy sea, and remained a steady head-wind, with cloudy and squally weather, until we were within a hundred miles of Gibraltar, the night of the 4th inst. At Gibraltar we learned of the earthquakes hereabouts and in the south of France, and were satisfied, that, if we had escaped the shock of the earthquake, we had had our share of earthquake weather. How far experienced observers may be able to connect our remarkable atmospheric disturbances at sea with the almost simultaneous quakings on land, I will not venture to suggest, but leave with you the record as it was made up at sea before we knew any thing of what was taking place on land.

At Gibraltar we learned that the western Mediterranean had been exceedingly stormy during the week following the earthquake, and it will probably be found that the atmospheric disturbance corresponded closely with that which we experienced at sea.

HENRY D. HARROWER.

Genoa, Italy, March 9.

Notes on the diet of amblystomas.

All this past winter I have kept, in a little water in a small covered tin can, a large adult specimen of *Amblystoma mavortium*. Upon several occasions he has had the water about him freeze perfectly solid; and by accident he once remained in this condition, firmly fixed in the clear cake of ice, for a period of forty-eight hours. When spring came about, I removed him to a large and comfortable glass jar, with a heap of rocks in it for him to come out of the water and rest upon.

As he had not eaten any thing whatever for nearly five months, it struck me that he might have a good appetite for some raw meat. My suspicions were fully confirmed, for he ravenously devoured five pieces of lean beef in rapid succession, each piece being about as large as an ordinary lima bean.

Next day I could not get him to touch any thing, nor could he be tempted by the most delicate morsel of raw beef on the second day after his feast. The third day he seemed to me to be rather uneasy; and, believing him to be hungry again, I offered him a nice little piece of lean and raw mutton, as I had no beef. He at once snapped at it eagerly, taking the entire piece in his mouth. It was not there more than a fraction of a second, however, when his eyes

began to roll in his head with a peculiarly horrified expression; and with a disgusted effort he immediately ejected the morsel of mutton again, and then took to spitting and gaping in a way that I never saw him guilty of before. There was no doubt in the world but that he was hungry; my several renewed efforts, however, to get him to eat the mutton, all failed.

So far as this individual specimen is concerned, he undoubtedly has a great aversion to that kind of meat, and it would be interesting to know whether this is merely 'a personal idiosyncrasy,' or whether it is universally the case. R. W. SHUFELDT.

Fort Wingate, N. Mex., March 14.

Old maps of the Great Lakes.

In looking over (for other purposes) some of the old maps in the congressional library, I have been struck with the confusion of ideas which seems to have prevailed among the early geographers on the subject of the drainage of the Great Lakes. Tracings of several are before me. One marked conjecturally on the original 'ab 1690' shows 'Lake Erius or Felis' connected by a good broad natural canal with the Potomac, which is represented as rising, at farthest, not much above the site of Washington. This is the harder to account for, inasmuch as the river-bank below, and the adjacent shore of Chesapeake Bay, were evidently well settled. Port Tobacco, Bristol, Calverton, St. Mary's, Arundelton, and Whitehall make a good sprinkling of villages, most of which have changed their names or passed away altogether; but a little beyond them all is twilight, with its illusions. So far as one can make out, the Anacostia or eastern branch is given the work of lake-drainage.

On a map of the world published in 1670 by Thornton of London, the Mississippi takes its rise in 'Grand Lake,' evidently Lake Superior. A map of America 'ab 1685' makes Lake Ontario the source instead; and there is yet another, of which I made no note, that represents Lake Erius as discharging in the same manner and direction. All or nearly all of these geographers were aware of the St. Lawrence and its relations to the lake system, but they believed in a double drainage in very different directions.

A map ('ab 1690') of "New England, New York, New Iarsay, Pensilvania Maryland and Virginia, sold by Iohn Thornton at y^e plass in y^e minorities" and others, is generally correct as to the outline of Chesapeake Bay and the tide-water part of the Potomac, but above the Little Falls it takes the name of Turkey Buzzard River. At no very great distance north of this point, this stream rises amid figures of trees and hills, with wild animals in the distance; but 'Lake Erius' is not called in to assist conjecture.

WM. H. BABCOCK.

Washington, D.C., March 10.

A meteorological inquiry.

Why do the winds at Denver blow either north or south nearly fifty per cent of the time, coming from the north during the day, and from the south by night? The record for 1884 shows twice as many south winds as north, but two observations are made at night to one during the day. H. A. HOWE.

Denver univ., March 2.