

201.—TREATMENT OF THE CASELLA-MILLER THERMOMETER.**By LOUIS P. CASELLA.**

[From a letter to Prof. S. F. Baird.]

I regret to learn the difficulties you describe in connection with some of my thermometers. I incline to believe that I could correct most of the thermometers you may have which are not broken, and will be most glad to do all in my power, if you will let me have them, telling your assistant to pack them carefully so as to prevent their being further disarranged.

The usual precaution against disarrangement in the first instance is that they should not be kept lying flat; that when sent from place to place the indices should be lifted well up from the mercury. If by chance a small portion of mercury gets over the bottom of the index, hold it flat and use the magnet to draw it slowly up. With the head quite raised, tap it smartly on the palm of the hand, the portions of mercury become detached and fall down to the main column. Warm the surface freely before the fire, then hang up; they thus become united.

As these are the only thermometers that register the maximum and minimum temperature they were adopted with my arrangement, and have thus shown the temperature of all depths of the sea in a way that has not yet been contradicted, though I regret this tendency to disarrangement which I have acknowledged from the first. Should you send yours for repair, I propose adopting an arrangement of case that will, I hope, enable me to employ an easier kind of index. This I will try to have ready so as to apply to yours or to part of them when they come.

147 HOLBORN, LONDON, E. C., *May* 21, 1884.

202.—HATCHING BLACKFISH AND SPANISH MACKEREL.**By R. E. EARLL.**

[From letters to Prof. S. F. Baird.]

This morning, while at the fish-wharves, I discovered that nearly all of the blackfish (*Centropristis atrarius*) were thoroughly ripe, and eggs would run from fully 50 per cent. of the females in handling. I took a number of thousand and impregnated them. They sink readily in salt water, and have a diameter of $\frac{1}{27}$ of an inch. I saved some in alcohol and glycerine. Many of the other species are well advanced and will spawn in two or three weeks at most. I shall try to get a full series of ovaries in alcohol for future examination.

CHARLESTON, S. C., *March* 25, 1880.