

MISCELLANEOUS NOTES.

As the Editor expresses willingness to receive notes on any entomological subject, I give my experience with "vertical" inflation of caterpillars. I have done a great deal of inflating, and find three bad faults with the common horizontal ovens.

1st. The air pressure necessary to extend the caterpillar often is enough to force the skin out of shape.

2nd. By beginning the drying at the tail-end one sometimes discolours the rear segments when it comes to using heat sufficient for stewing the juices out of the head.

3rd. The caterpillar has to be twirled around, and as the hand becomes tired pencils and hairs are likely to be rubbed off.

At the end of 1902 I took my lamp-chimney oven, cut a few notches at the bottom for ventilation and turned it upright on a sand bath heated from below. In this my specimens dried like a charm. Gravity helping, almost no air was needed, there was no twirling, and the heads received the first and greatest heat. I got good results with such caterpillars as full-grown *Acronycta Americana*, almost impossible to inflate by the usual method. Being hurried, I, in one or two instances, finished up the tail ends of the fleshy specimens in the ordinary oven, and I hardly did work enough to conclusively prove the experiment. Still, it is full of possibilities, and it is perfectly obvious that with twirling given up one can use a water column for air pressure and attend to several ovens at the same time.

With the exception of Mr. Merrick's "Haploas," photographed in the January number of the Entomological News, the writer never saw a drawer of specimens that were even approximately in line. I know my own all veer to the right. This winter I sawed off a wooden T-square, and now by running it along the front edge every pin goes in mathematically correct.

Mr. Lyman's statement about the ease of raising *Papilio brevicauda* is fully endorsed. I once had a dozen or thirteen of these caterpillars; fed them first on parsley, then on parsnip tops, and finally on their native food-plants, obtained from the Lower Provinces by the kindness of Mr. Winn. They all went into pupa, were brought into the kitchen about Christmas time, and all but one hatched.

DWIGHT BRAINERD,