

CORRESPONDENCE.

DEAR SIR,—

Mr. Behrens (*p. 200, Vol. 8*) writes: "Mr. V. T. Chambers is satisfied to get Tineidæ dead and dry, and even untouched by a pin." "Satisfied" in this connection is almost too strong a word, and may be misleading. So a distinguished Lepidopterist of Europe has made an objection to my work on the ground that I only keep specimens packed in cotton, and that, unpacking them, I place them under a microscope and prepare my descriptions from the appearances thus presented. This statement, like the preceding by Mr. Behrens, comes from a misapprehension of the facts. I prefer always to have some of my specimens on pins and some of them with the wings spread. It is best to study them pinned and not pinned, spread and not spread. When the opportunity offers, I prefer in the first place to observe them closely alive, before I take them, and when the quantity of material suffices, I also examine them both spread and not spread after they are dead, with the eye, a simple lens, or a compound microscope, according to circumstances. Indeed, in by far the greater number of new species described by me, the insects have been examined not only in the conditions above mentioned, but have also been dissected; as is evident not only from the published accounts of the neuration of the wings, but much more by the multitude of drawings of the neuration now in my possession. All of my Tineina from Texas and from Canada, and nearly all that I have received from Miss Murtfeldt, from St. Louis, have come pinned and spread. Mr. Behrens wrote to me that he preferred not to undertake the task of pinning these little things, and besides he had not time, and I replied that I would be glad to get them packed in cotton without pinning; and all of his specimens have been sent in this way. I have also received a few specimens from one or two other Entomological friends in the same condition. This mode, however, does not answer for sending Tineina for any considerable distance. The antennæ, palpi and tufts of scales on the wings or elsewhere are almost invariably rubbed off, and the insect is otherwise worn and denuded, so that I have not attempted to describe one specimen in ten that has been received in this condition. This plan, or rather a modification of it, answers better for preserving Micros taken at home, and which do not have to be shipped. Of the greater number of my Tineina I have not attempted the preservation of many specimens at a time. Making but few exchanges, I have kept but very few for that pur-

pose, and for my own use, after using a sufficient number and in various conditions for generic and specific diagnosis, I have contented myself with keeping a few, not *packed* in cotton, but simply laid on a loose tuft of cotton, in a pill box, which being set away in the cabinet, the insect remains as perfect as when first placed there. Such specimens, if needed for future observation, I take by the legs in the stage forceps of the microscope, and they are in good condition for observation either under the microscope or without it, as they may by means of the forceps be conveniently turned and handled without danger of breaking them, and every part of the insect may be well observed unless—as sometimes happens—the wings are so perfectly closed as to conceal the upper surface of the abdomen. But these are simply specimens preserved for future reference. A few specimens of *very* rare species I have not attempted to pin and set because of the danger of injury to such rare species. A few others of the smallest species (as e. g., some *Nepticulæ*) I have treated in the same way, because of the certainty of injury, if not of absolute destruction, in the attempt to pin them. But in other cases my descriptions have been prepared from observations of numerous specimens in various conditions as to preparation. I have found the species which I have described from this locality very numerous, so that a morning's ramble any day from May 1st to November 1st will supply me with specimens of fifty species, and half a bushel of mined leaves. I have, therefore, not felt the necessity of preserving pinned specimens of such species. Indeed, some years ago I seldom took the trouble to pin and spread common species at all. In a series of specimens the wings of some would be found in one position, some in another, or more frequently I would separate the wings entirely from the body. But a few years ago I began to make a collection to be preserved as types of all my species. These were all pinned and spread. Unfortunately, during my absence in Colorado, the greater part of this collection was destroyed. One or more specimens of the greater number of species were fortunately preserved, and most of the other species can be supplied. This collection is now in the Cambridge Museum. It contains types—pinned and spread—of something over 200 species.

There are, however, serious objections to pinning and spreading many Tineina. Very few persons are able to make a good "mount" of the small species; it is well nigh impossible to do it without *some* denudation, and an amount of it which could not be appreciated in a larger moth, is ruinous in one of these little things. Many species are characterized by

tufts of raised scales, which are very likely to be removed in the attempt to mount them; and frequently the distinguishing specific characters are to be found either on the extreme margins of the wings, or in the apical cilia, just where they are most likely to be removed or injured in pinning; the thorax, of course, is destroyed in small species. It is therefore best to make very careful observations before attempting to pin a "Micro." If a species is very rare, so that I desire to keep the specimen, I should want it pinned and spread; but if it was unique and small I should not run the risk. And when one keeps a cabinet of pretty curiosities, of course they are best pinned and spread. But for the purpose alone of scientific study or description, I would prefer the untouched insect, and except for the preservation of types, would deem pinning unnecessary.

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NOTES ON HYBERNATING BUTTERFLIES.

In No. 4, Vol. 7, of *Psyche*, Mr. Scudder gives some notes on early spring butterflies at the White Mountains, noticed during June 2nd to 5th. Speaking of *Vanessa F-album*, he says: "One or two specimens only were seen on the 4th, apparently just out of winter quarters; they appear later I believe than other hibernating Praefecti, and those seen were on the sunny side of a barn which had probably served as their winter refuge."

In this locality, as elsewhere, *V. antiopa* is the first butterfly seen in spring, but as far as my experience goes, *F-album* appears as early as *milberti* and the *Graptas*; I am not sure about *P. cardui* and *huntera*. Referring to my note book, I find the following dates for *F-album*: April 18th, 1874, one specimen observed; April 26th, 1874, a pair taken in *coitu*; May 14th, 1876—cold, late spring—a specimen taken at willow blossoms. *Antiopa* makes its appearance here as soon as the snow has melted off sheltered spots on the south-western slopes of Montreal Mountain. The earliest record I have of its appearance is April 4th, 1875; on that date I saw a specimen on the wing and found two others under a stone. *Antiopa* can be found under stones, on dry sunny slopes with scattered trees, every spring, but I never met with any other species in its winter quarters. Do they hibernate in places less exposed to the influence of the early spring sunshine? If so, may not this account for their appearing a week or two later than *antiopa*?

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