

the known species in his own collection, which, it is understood, is to be offered to the British Museum (Natural History). With this advantage he became a centre to which Microlepidoptera were sent in from all parts of the World for identification and description, and it would be difficult to find any country from which Meyrick had not described some species, his work ranging literally "from China to Peru" and Argentina and from Greenland to the Subantarctic Islands of New Zealand.

Edward Meyrick was elected in 1880 to the Entomological Society of London, which thus loses its second senior Fellow, to the Zoological Society in 1889 and to the Royal Society in 1904, and he was also an Honorary Fellow of the Royal Society of New Zealand and of several Australian Societies.

During his later years he lived a very retired life at Marlborough but was actively at work until the end and was always most kind and helpful in considering problems and examining specimens. Of him we can indeed say, "We shall not see his like again."

He leaves a widow, two sons and two daughters, to whom our sympathy is extended.

The photograph, from which our Plate has been made, was taken in his garden at Marlborough on 7th September 1930.

T. BAINBRIGGE FLETCHER.

THE ARRANGEMENT OF COLLECTIONS OF BRITISH LEPIDOPTERA IN MUSEUMS.

By E. A. COCKAYNE, D.M., F.R.C.P.

I believe that the British Museum and the Hope Department at Oxford are arranging their collections of British Lepidoptera according to the county of origin. This seems to me to be a most mistaken method. If each county consisted solely of one geological formation and that formation were not found in any other county, it would be most useful, but unfortunately most counties contain various formations and the majority of them run into or crop up in others. The arrangement is therefore quite arbitrary and unnatural. As a result of it the whitish form of *Gnophos obscurata* from the chalk might appear side by side with the blackish form from the peat, and the dark moorland form of *Ematurga atomaria* with the paler ones from the downs or grassy marshland. On the other hand the whitish form of *obscurata* from the Kent and Sussex chalk, which is geographically continuous and geologically the same, would be separated in two different series. *Polia chiab* ab. *suffusa* occurs sparingly with the type in an area which falls into North Derbyshire and South Yorkshire, while further north in Yorkshire it is absent. The arrangement by counties would give no indication of this and indeed would tend to conceal it.

Nearly all the material in our museums is selected and therefore gives no information about the relative frequency of different forms of common insects, that are widespread and occur on all geological formations. Examples of this are *Triphaena pronuba* and *Apamea secalis*. It would be both interesting and instructive to know the relative num-

bers of the different forms of such species in various parts of the country, and though the arrangement by counties would show the forms that occur in them, it would give no information about their respective abundance.

I think this might be achieved in the following way. Equidistant lines might be drawn from east to west and from north to south, and consecutive numbers might be used for the horizontal zones beginning with the most southerly and letters for the vertical zones beginning with the most easterly. Each square would thus have a number and a letter. To obtain data about each species for all the squares would be a slow process, but the necessary information could be collected gradually, and if collectors would make accurate counts of the different forms of two or three species in their own district and record the total number and the percentages and send a representative series to the museum, they would make a real contribution to our knowledge. Material from larvae collected wild in several seasons would give the most accurate figures. A few records of this kind have been published, but they are quite inadequate and hard to find. Could not the editors of our periodicals and the secretaries of our local societies co-operate in a scheme of this kind? When sufficient data have accumulated series could be arranged in accordance with the squares on the map, supplemented by some graphic method such as a card placed at the bottom of the series from each area marked with squares proportional in size to the frequency of each form. In this way one could see at a glance what forms occurred in each area and their relative frequency there.

The ratio of typical *Xanthia fulvago* to its aberration *flavescens* and of *Dicycla oo* to *renago* demonstrated in this way would be most interesting. All we know now is that both aberrations become commoner towards the northern part of the range of these moths, and the arrangement by counties might not show even this fact.

For species which do not vary, such as *Dipterygia scabriuscula*, a pair from each area in which it occurs would show the range, and for species of which the forms are ill-defined a random sample from each area would suffice. I do not think any method would be suitable for universal application. Each species would require special consideration and the method best adapted to show the geographical variation and distribution could be used.

I will now return to destructive criticism of the arrangement by counties. Specimens of a rare aberration which occurs in most parts of the country would be separated from one another. Owing to their rarity they would probably be unrepresented in the series from some counties, though they really occurred there, and this would give a misleading idea of their distribution. Moreover, placing these rare aberrations far apart would prevent a proper appreciation of their variability. Most of the major aberrations, such as *Abraxas grossulariata*, ab. *nigrosparsata* and *Arctia caia*, ab. *schantzii* show considerable variation owing to the action of modifying genes, and this would tend to be hidden by the use of the method which I am condemning in this note.

I will now bring forward another constructive suggestion. I think the value of collections in museums would be increased if a label were placed at the side of forms that have been bred on scientific lines, to show their genetic relationship to the type or to other forms, with a

reference to the papers in which proof was given. Both the banded and melanic forms of *Ennomos quercinaria* are recessive to the type, whereas the banded form of *Angerona prunaria* is dominant. It cannot be said that either typical *Aplecta nebulosa* or ab. *thompsoni* is recessive, because in ab. *robsoni* the heterozygote is intermediate, but both are homozygous, the latter for melanism and the former for the pale ground colour. Typical *Biston betularia* is recessive to the so-called intermediate ab. *insularia*, and this in turn is recessive to ab. *carbonaria*, the three forming an allelomorphic series. Labels indicating such facts as these would add both to the interest and scientific value of a museum collection.

NAMES OF MICROLEPIDOPTERA.

By T. BAINBRIGGE FLETCHER, R.N., F.R.E.S., F.Z.S.

(Continued from p. 26.)

2. *PAMMENE INQUILINA*, n. sp.

Tortrix fimbriana, Hw., Lep. Brit. [iii], p. 446, No. 164 (1811).

Pamene [!] *fimbriana*, Rebel, Cat. Pal. Lep., II, 123, No. 2225 (1901).

Pammene fimbriana, Meyr., Rev. Handb., p. 586, No. 6 (1928).

The combination *Tortrix fimbriana* was praeoccupied by Thunberg in 1791 (*Ins. Suec.* (ii), p. 44, t. 5, f. 3) for a species now known as *Peronea fimbriana*, Thnbg. (Rebel, Cat., No. 1450). The name, *fimbriana*, Hw., 1811, being a primary homonym, was never valid and this species seems to have no available synonym and must therefore be renamed. The specific name, *inquilina*, which refers to the larval habit of living in galls, has been used in Eucosmidae for *Cydia inquilina*, Kearfott, 1907, but that is an *Enarmonia* and will not praeoccupy in *Pammene*.

3. *ETHMIA TERMINELLA*, n. sp.

Tinea sexpunctella, Hb., Samml. Eur. Schmett., Tin., t. 44, f. 304 (1805-1810) [♂].

[nec *Tinea sexpunctella*, Fb., Ent. Syst., III, ii, 313, No. 115 (1794)].

Psecadia sexpunctella, Rebel, Cat. Pal. Lep., II, p. 167, No. 3140 (1901).

Ethmia sexpunctella, Meyr., Cat. Hyponomeut., p. 30 (1914).

Ethmia sexpunctella, Coney, Entom., LXX, 210, t. 4, f. 7 [larva and moth, both × 2] (1937) [England: Dungeness].

The name *Tinea sexpunctella*, Hb., 1805-1810, was a primary homonym of *Tinea sexpunctella*, Fb., 1794, and therefore was invalid from its inception and cannot be used for this species. I can find no available synonym and therefore rename it *Ethmia terminella*, the specific name now given alluding to the terminal black dots on the forewing, a character which readily distinguishes this from *E. decemguttella*, Hb., the only English species with which it is likely to be confused.

Tinea sexpunctella, Fb., 1794, described from Italy, is the same species as *Gelechia virgella*, described as *Tinea virgella* by Thunberg also in the year 1794. I have no evidence at present as to whether *virgella* antedates *sexpunctella* or vice versâ; pending more exact dates of pub-



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