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rigid enough to work their way through the feathers and into the cloth. This barbed character is found also in the hair of many animals, and is taken advantage of in the making of felt as was formerly done from the hair of the beaver, for making the shapes of hats. This is fully explained and a magnified illustration, (Fig. 34.) is given, of the hair of the beaver in Mr. Horace T. Martin's new and excellent work "CASTOROLOGIA" where, not only this, but almost every other imaginable information about the beaver is to be found.

Miss Eaton also sent some specimens to the Smithsonian Institution and to the United States Entomologist. In *Insect Life* Vol. IV., p. 404 the matter is referred to and some interesting data are given of similar work by other insects, as follows: "There is occasionally sent in to the National Museum or the Department of Agriculture, a sample of the felting of bits of feathers into the substance of bed ticking or pillow-casing which is said to have been done by some insect. This felting is frequently very beautifully done, and the inside of the cloth next to the feathers appears like a velvet tissue. Ordinarily the breaking up of the feathers which results in this felting, is done by *Attagenus piceus*, a Dermestid beetle which is particularly fond of feathers. We have just received a very fine specimen from Lucy C. Eaton, of Truro, Nova Scotia, in which the work was done by *Tinea pellionella*, one of the commonest of the northern clothes moths. It must be remembered in these cases that the felting is not done by the insects, but by the mechanical action of the feather barbules themselves. When the feathers have once become broken up into small bits by the action of the insects, then through the constant pressing together of the pillow they gradually work themselves into the cloth covering in which they are held by their microscopic retrorse serrations. To one who looks at a fine specimen of this accidental felting, there can not fail to come the suggestion that feathers could be commercially used in this way. The matter has been occasionally referred to in print, notably in the *American Naturalist* for December, 1882, and in *Insect Life*, Vol. II., pp. 317-318, another instance is given of the felting of a pillow-case from duck feathers which had been destroyed by Dermestid beetles. It is described as being 'entirely covered with a fine growth of down as evenly and thickly as the fur on a mole-skin, which it very much resembles; it is firmly attached, the down breaking rather than pull off.'

The editor of *Insect Life* stated at that time: "Pillows in which this felting of the ticking occurs have been infested by one of the Dermestid beetles, (in all of the cases with which I am familiar it has been *Attagenus megatoma*) whose work has resulted in the comminution of the feathers, and the felting results from the subsequent mechanical action. The small feather particles are barbed, as you are aware, and, whenever caught in a cotton fabric by their bases, become anchored in such a way that every movement of the pillow anchors them still further."

In addition to the above the following interesting information is given:

"A similar bit of ticking was exhibited at the Philadelphia Academy of Natural Sciences, April 5th, 1883, and elicited the information that one of the members had some years previously examined a similar material known to have been formed from the fragments of gull feathers, and that a cloak had been made from it which wore well."

With regard to the distinctive differences between these three troublesome immigrants from the old world, it may be well to mention the following points:

1. *Tineola biselliella* is the same insect as has been frequently treated under the name of *Tinea flavifrontella*. This is the commonest species in Canada. The caterpillar spins only a silken path or tube over the surface of, or through, the article attacked. The moth is pale yellow without spots, and when at rest, it holds its wings slanting. Fig. 32.
2. *Tinea pellionella*. The caterpillar of this species from the very first lives within a case, which it carries about with it; the moth is darker in colour with a few black spots on the wings, which lie flat on the back when the insect is at rest. Fig. 33.
3. *Tinea tapetzella*. The caterpillar of this species spins for itself a silken gallery mixed with fragments of the material it is attacking. It remains at all times hidden within this gallery. The moth is easily distinguished from the others by the front wings which are black from the base to the middle and white or gray beyond.