

when I had no control of the Coleoptera, a somewhat cranky assistant threw away labels by the bushel, without any consideration whether they were types or in the handwriting of the most eminent entomologists, and replaced the labels by numbers referring to a carelessly written catalogue. A number of families of the Melsheimer and Ziegler collections shared the fate of this destruction.

NOTES ON MALLOPHAGA AND PEDICULIDÆ.

BY HERBERT OSBORN, AMES, IOWA.

[Read before the Entomological Club of the A. A. A. S.]

Identical or very similar species of these parasites occur on the closely related birds and mammals of Europe and America, as is shown by the following list of species collected at Ames :—

DOCOPHORUS.

D. platystomus N. On *Buteo swainsonii*, differs slightly from Denny's description and figure. In Europe occurs on *Buteo vulgaris*.

D. cursor N. On *Otus vulgaris* var. *Wilsonii*, differs from Denny's description in having lateral fasciæ on seven segments, the eighth being entirely dark, the ninth white; foveolæ arranged differently on the fasciæ. But these points agree well with Piaget's figures, so there may be a discrepancy in Denny's work. In Europe occurs on *Strix (Otus) brachyotus*, according to Piaget, and *vulgaris* and *brachyotus*, according to Denny.

D. testudinarius D. On *Numenius longirostris*, agrees quite perfectly with Denny's description of specimens from *Numenius arquatus*, also with Piaget's figure.

D. cygni D. On *Cygnus buccinator* (?) Identical with descriptions of European specimens from *Cygnus musicus*, according to Piaget, and *C. Bewickii*, according to Denny.

Specimens belonging to this genus were also taken from Shrike, Hairy Woodpecker, Tern, Crow, Blackbird, Finch, House Martin and Coot, but are as yet undetermined.

NIRMUS.

N. fuscus N. On *Buteo swainsonii*. Differs slightly from Denny's description and figures of specimens from *Buteo vulgaris*.

N. brachythorax G. On *Ampelis garrula*. Agrees very closely with descriptions and figures of specimens from the same bird in Europe.

N. candidus N. On *Colaptes auratus*; also same species, probably, from *Picus villosus*. Differs from descriptions of specimens from *Picus canus* and *P. viridis* of Europe in some details, and further material may perhaps establish it as a variety.

Also undetermined *Nirmi*, from Crow, Meadowlark, Pelican, Yellow-headed Blackbird, Duck and Avocet.

ONCOPHORUS.

O. minuta N. On *Fulica americana*. Occurs in Europe on *Gallinula actinopus*, *orientalis* and *haematopus*, according to Piaget, and probably equals Denny's *N. fulicæ* from the *Fulica atra*.

LIPEURUS.

L. baculus, N. On domestic pigeons. No apparent difference from European specimens.

L. squalidus, N. On *Anas boschas*. Apparently here, as in Europe, common to many species of ducks. Also undetermined *Lipeuri* from Crane, Avocet, Bittern and Snipe.

ORNITHOBIUS.

O. bucephalus G. On *Cygnus buccinator*. Agrees closely with descriptions of specimens from *C. musicus*.

TRICHODECTES.

T. retusus N. On *Putorius ermineus*. Occurs in Europe on *Mustela vulgaris*.

T. scalaris N. Common to cattle the world over.

T. parumpilosus. Common to horses.

Also specimens in this genus from the Pocket Gopher, *Geomys bur-sarius*, apparently undescribed.

MENOPON.

M. pallidum N. Common to domestic fowls.

Also several undetermined species.

COLPOCEPHALUM.

C. flavescens N. On *Nauclerus furcatus*. In Europe said to occur on various Raptores.

Also undetermined *Colpocephali* from *Scops asio*, *Junco hyemalis*, *Bubo virginianus*, *Melanerpes erythrocephalus*, and a duck.

NITZSCHIA.

N. pulicare N. On *Chætura pelasgia*. Abundant on every bird of this species that I have examined. The eggs were always found attached to the feathers on the back of the head, and on no other part of the body. Apparently no difference between these and those on *Cypselus apus* in Europe.

TRINOTON.

T. luridum. On *Anas boschas*. Occurs in Europe on many species of ducks.

PEDICULIDÆ.

Pediculus capitis and *vestimenti* and *Phthirius inguinalis* naturally present no variations.

HAEMATOPINUS.

H. piliferus. On dog. Has not been found common.

H. eurysternus. On cattle. Common, and without any noticeable variation. A related species, though quite different, has also been secured from cattle, but as yet not harmonized with any European species.

H. acanthopus. On *Arvicola*. Agrees closely with European.

Specimens of undetermined *Haematopini* presenting very marked characters, have been taken from five different species of Rodentia, the specimens from one of these (*Geomys bursarius*) differing so greatly as to necessitate a revision of the generic characters, or else the forming of a new genus.

The author desires to make a careful study of these groups, and would be very glad to obtain specimens.

ENTOMOLOGICAL NOTES.

BY DR. P. R. HOY, RACINE, WIS.

Racine, Wis., is situated on the west shore of Lake Michigan, at the southern extremity of the heavily timbered district, where the great prairies approach near the lake from the west. Latitude, 42° 46' N.; longitude, 87° 48' W.