

A LIST OF MALLOPHAGA
FOUND ON INTRODUCED AND DOMESTICATED
ANIMALS IN AUSTRALIA.

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THE present communication contains a list of the Mallophaga previously recorded as occurring on introduced animals in Australia, as well as several whose presence is now noted in literature for the first time, though some of them are common, well-known forms. We have recently published (J. & H., 1912, a,) a census of the species recorded from the native Australian fauna.

The application of the law of priority has necessitated the alteration of some well-known names.

BIRDS.

COMMON FOWL (*Gallus domesticus*).

1. *Lipeurus caponis* (Linn). Syn. *L. variabilis*, Nitzsch.
—Common. N.S.W., Victoria,* Q'land, W. Austr.
2. *Lipeurus heterographus*, Nitzsch.—Vict., Sydney (N.S.W.)
3. *Goniodes dissimilis*, Nitzsch —Vict., N.S.W.
4. *Goniocotes gigas*, Tasch.—N.S.W., Q'land. The occurrence of this parasite (quoted as *Gc. abdominalis*) on fowls in N.S.W., has already been recorded by Bradshaw (1909, p. 51). It is fairly common.
5. *Goniocotes hologaster*, Nitzsch.—Uncommon. Melbourne (Victoria).

*We are indebted to Mr. A. S. Le Souef for most of the Victorian material referred to in this paper.

This species was referred to by DeGeer as *Ricinus gallinæ*, which name therefore appears to have priority. Linnæus described a *Pediculus gallinæ* (= *Menopon gallinæ*), but soon afterwards DeGeer divided up the Linnæan genus into *Pediculus* (including the blood-sucking species), and *Ricinus* (including those which feed on epidermal structures). Thus *P. gallinæ* L. should have become *R. gallinæ* (L.), in which case *R. gallinæ* DeGeer would be invalid, as it refers to a different species. DeGeer's work is not available to us, so that we do not know whether that author believed that he was referring to Linnæus' species, or whether he took no cognisance of *P. gallinæ* L. and erected a new species, *R. gallinæ*. We are thus unable to state whether the parasite should be termed *Gc. gallinæ* (Geer), or *Gc. hologaster* (N.), though it seems to us that Nitzsch's name is the more correct.

7. *Menopon gallinæ* (L.)—Syns. *M. trigonocephalum* (Olfers); *M. pallidum*, Nitzsch. A common parasite. N.S.W., Victoria, Queensland, West Australia.
8. *Menopon stramineum*, N.—Syn. *M. biseriatum*, Piaget. Common—N.S.W., Victoria, Q'land.

TURKEY (*Meleagris gallopavo*).

1. *Lipeurus meleagridis* (L.)—Syn. *L. polytrapezius*. N. Sydney (N.S.W.)
2. *Goniodes styliifer*, N. N.S.W., Victoria, Q'land.
3. *Menopon stramineum*, N. N.S.W., Victoria, Q'land.

GUINEA FOWL. (*Numida meleagris*).

1. *Lipeurus caponis* (L.)—Sydney (N.S.W.)
2. *Gonicotes rectangularis* (Nitzsch), Burm.—Sydney. This species is usually quoted as *Gc. rectangularis* N., but the latter name is a synonym.

PHEASANT (*Phasianus colchicus*).

1. *Lipeurus caponis* (L.) Victoria.
2. *Goniodes colchici*, Denny.—Syn *G. colchicus*, Giebel. Victoria.

PEACOCK (*Pavo cristatus*).

1. *Goniodes pavonis* (L.)—Syn. *G. falcicornis*, Nitzsch
Melbourne, Sydney.

SILVER PHEASANT. (*Gennæus nycthemerus*.)

1. *Menopon fulvomaculatum*, Denny.—Syn. *M. productum*, Piaget. Victoria.

PIGEON (*Columba livia dom.*)

1. *Lipeurus columbæ* (L.)—Syn. *L. baculus*, N.
Sydney, Melbourne, Brisbane.
2. *Goniodes (Coloceras) damicornis*, Nitzsch. Sydney.
3. *Goniodes (Coloceras) piageti*—nom. nov.—Syn.
Gd. minor, Piaget (1880, p. 256), nec. *Gd. dispar*.
var. *minor*, Piaget (1880, p. 248)*.
4. *Goniocotes bidentatus* (Scopoli).—Syn. *Gc. compar*,
Nitzsch. Sydney.
5. *Menopon giganteum*, Denny.—Syn. *M. latum*,
Piaget. Sydney.
6. *Colpocephalum turbinatum*, Denny.—Syn. *C. longicaudum*, Nitzsch (1866). Sydney.

INDIAN DOVE (*Turtur suratensis*). A common bird in some Australian cities.

1. *Goniocotes chinensis*, Kellogg & Chapman. Sydney.
Previously recorded only from *Turtur chinensis*,
from Hawaii.

GOOSE (*Anser domesticus*).

1. *Lipeurus crassicornis* (Olfers).—Syn. *L. jejunus*,
Nitzsch. Victoria ; Sydney, Richmond (N.S.W.)

DUCK (*Anas domestica*).

1. *Lipeurus anatis* (Fabr.)—Syn. *L. squalidus*, N.
Sydney, Melbourne.
2. *Menopon obscurum*, Piaget. Sydney.

MUSCOVY DUCK.

1. *Lipeurus crassicornis* (Olfers). Sydney.

*According to Article 11, of the International Code of Zoological Nomenclature, "specific and sub-specific names are subject to the same rules and from a nomenclatural standpoint, they are co-ordinate—that is, they are of the same value." Hence our substitution of a new specific name for Piaget's species.

SWAN (*Cygnus*, dom.)

1. *Lipeurus crassicornis* (Olfers). Victoria.
2. *Ornithobius fuscus*, Le Souef (1902, p. 91)—Melbourne Zoological Gardens.
3. *Ornithobius cygni* (L.) Victoria, Sydney.

STARLING (*Sturnus vulgaris*).

1. *Philopterus leontodon*, Nitzsch. Sydney.
2. *Degeeriella nebulosa* (Burmeister). Sydney.
3. *Menopon spinosum*, Piaget. Sydney.

SKYLARK (*Alauda arvensis*).

1. *Menopon parviceps*, Piaget. Richmond,* (N.S.W.)

OSTRICH (*Struthio camelus*).

1. *Lipeurus quadrimaculatus*, Piaget. Richmond (N.S.W.). (In collection of Entomological Branch, Dept. of Agriculture, Sydney).

MAMMALS.

ASS (*Equus asinus*).

1. *Trichodectes pilosus*, Giebel (*nec.* Piaget). Victoria.

HORSE (*Equus caballus*).

1. *Trichodectes pilosus*, Giebel. Victoria. Lea (1908, p. 105), refers to this species, but does not state whether it occurs in Tasmania. Linnæus (Syst. Nat. II., 1018), described *Pediculus equi* from the horse. In 1842, Denny (1842, p. 191), gave an account of a parasite which he regarded as belonging to Linnæus' form, as *Trichodectes equi*. In 1874, Giebel (1874, p. 59), described *Tr. pilosus*, ostensibly renaming *Tr. equi*, Denny and *Pediculus equi*, Linn. Piaget (1880, p. 397), in 1880, separated Denny's *Tr. equi* from Linnæus' form, redescribing the former as *Tr. parumpilosus*, while on p. 395, he described what he believed to be *Tr. pilosus*, Giebel, giving as a synonym *Pediculus equi*, Linn. A little later, Taschenberg (1882, p. 214), stated that Piaget was correct in identifying *Tr. equi*, Denny with *Tr. parumpilosus*, and,

*We are indebted to Mr. C. T. Musson, of the Hawkesbury Agricultural College, Richmond, N.S.W., for specimens from this locality.

moreover, after having examined Giebel's specimens, was convinced that *Tr. pilosus*, Giebel, was also synonymous with *Tr. parumpilosus*, Piaget. He went on to state that the two species from horses should be quoted as *Tr. pilosus*, Piaget, and *Tr. parumpilosus*, Piaget. Taschenberg does not appear to have recognized that *pilosus* was already preoccupied when Piaget adopted it. Railliet (1895, p. 835) quoted *Tr. pilosus*, Piaget, *nec.* Giebel, under the name *Tr. vestitus*.

The synonymy of the two species is thus :—

(a) <i>Pediculus equi</i> , Linn.	(b) <i>Trichodectes equi</i> , Denny,
<i>Tr. pilosus</i> , Piaget, <i>nec.</i>	<i>nec.</i> L.
Giebel.	<i>Tr. pilosus</i> , Giebel, <i>nec.</i>
<i>Tr. vestitus</i> , Raill.	Piaget.
	<i>Tr. parumpilosus</i> , Piaget,

From the foregoing it will be seen that Giebel, without any justification, renamed Denny's and Linnæus' species, believing both to be identical. It has since been shown that his description really referred to Denny's form, and not to *Pedic equi*, Linn. His name thus accidentally becomes the valid one for *Tr. equi*, Denny, *nec.* Linn., with *Tr. parumpilosus*, Piaget as synonym, while the Linnæan species must stand for the less common parasite, *Tr. equi* (L.), with *Tr. pilosus*, Piaget, *nec.* Giebel and *Tr. vestitus*, Raill, as synonyms. It might be stated here that Piaget's names are those generally used, but from the above discussion it will be seen that this should not be the case. Osborn (1891, p. 45-7) followed Piaget's nomenclature.

Ox (*Bos taurus*).

1. *Trichodectes bovis* (L.)—Syn. *Tr. scalaris*, Nitzsch. N.S.W., Johnston, 1911, p. 217. Queensland. We have restored Linnæus' specific name.

SHEEP (*Ovis aries*).

1. *Trichodectes ovis* (L.), Raill.—Syn. *Tr. sphaerocephalus*, Nitzsch. Victoria, N.S. Wales. Lea (1908, p. 105), has recorded the presence of this species under Nitzsch's name in Tasmania.

GOAT (*Capra hircus*).

1. *Trichodectes climax*. Nitzsch, Victoria, Nitzsch's name was published in 1818, but no description appeared (as far as we are aware) until Gervais published one in 1844.

CAT (*Felis domestica*).

1. *Trichodectes subrostratus*, Nitzsch. Victoria.

GUINEA PIG (*Cavia cobiata*).

1. *Gyropus ovalis*. Sydney.
2. *Gliricola porcelli* (Schrank)—Syns. *Gyropus gracilis*, Nitzsch; *Gliricola gracilis*, Mjoberg (1910, p. 18). We have reinstated Schrank's name on account of its priority, even though it is very inappropriate.*

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*Froggatt (1907), refers to some of Piaget's and Le Souef's species, but does not add any information regarding Australian Mallophaga, either native or introduced.