

# THE MALLOPHAGA (BITING-LICE) RECORDED FROM THE PACIFIC ISLANDS

BY GORDON B. THOMPSON.

*Reprinted from 'The Entomologist's Monthly Magazine,' Vols. lxxiv and lxxv.*

This paper is the fifth of a series devoted to listing the ecto-parasitic insects recorded from Pacific Island hosts and contains check-lists and host-lists of the Mallophaga recorded for the most part from birds (domestic and wild).

Following the principles laid down in the previous lists, I have only cited references which have some bearing on the species and records relative to the Pacific Islands. Most of the references have been checked against the originals.

It is quite obvious from a glance at the lists which follow that our knowledge of the Mallophaga parasitic on the innumerable birds which abound in the Pacific regions is extremely poor. A vast amount of collecting is necessary and should be done as soon as possible, as many of the birds are nearing extinction. The Mallophaga parasitic on birds of the interesting Galapagos Is. have received more attention than those from any other of the island groups, but even these are not well known. Nothing, except for a revision of a few species by Ferris, has been published on the lice of Galapagos Is. birds since about 1906. Kellogg, in association with other workers, has contributed most towards our present-day knowledge of them, but unfortunately until such time as further material is available which can be worked out in conjunction with Kellogg's collection no important advances can be made. Kellogg has drawn attention to the phenomenon known as straggling and seems perfectly satisfied, as shown by his extraordinary lists of hosts upon which some of the lice were said to have been taken, to accept it as being of common occurrence in the case of the parasites of the Galapagos birds. I am not prepared to believe that straggling occurs on these islands to anything like the extent to which it is stated. From my own experience of collecting I know full well how easy it is to produce artificial examples of straggling. The report on the Mallophaga of Hawaiian birds by Kellogg and Chapman contains some very remarkable instances of straggling which seems to me to be merely the result of carelessness on the part of the collectors. However, these remarks are made merely as a warning to future collectors.

It is interesting to note that the paper by Kellogg and Chapman on the Mallophaga of Hawaiian birds was published twice, once

in the Journal of the New York Entomological Society and again in Vol. III (pp. 305-321) of the Fauna Hawaiensis. Some years ago this struck me as being rather odd, so I wrote to Dr. R. C. L. Perkins, F.R.S., for an explanation. He replied, saying that it was an extraordinary thing that this paper should have been published in the Fauna Hawaiensis, for to the best of his knowledge a good collection of Mallophaga was made in the Hawaiian Is. during the time of his associations there and that they were never worked out and, moreover, that after numerous efforts were made to locate this material it has never yet been found. Assuming that the collection mentioned by Dr. Perkins was made, it is a very great pity that it has been lost, as I understand that some of the birds from which lice were collected are now almost, if not entirely, extinct. Maybe they will be found one day.

The check-list of the Mallophaga is divided into two parts. The first part deals with the lice recorded from domestic animals, the second with the lice of wild birds. Collections of lice from domestic animals would greatly increase the first list, which at present contains a very poor representation of both parasites and localities.

In dealing with the Mallophaga I have endeavoured to give correct synonymy, some of which is new, and also to place species in their correct genera. I am fully aware that such papers as the present one do little to increase our knowledge of the systematics of the group in question, but at the same time I do feel that it is a convenient opportunity of bringing to light references to species which may be overlooked, etc. It is to be hoped, however, that this paper may have the desired effect, and that is to make a strong appeal to those in a position to collect conscientiously the Mallophaga of the birds of the Pacific Islands.

In the case of the Mallophaga of birds of the Hawaiian Islands I have only given the references to Kellogg and Chapman's earlier paper published in 1902.

The host-list is also divided into two parts. The first part contains only those birds recorded from islands outside the Galapagos group, the second is concerned exclusively with the Galapagos avifauna. In almost every case I have brought the host names up to date with the aid of Mathews' 'Systema Avium Australasiagnarum' and Swarth's 'The Avifauna of the Galapagos Is.'\* In the first host-list I have omitted any obvious cases of straggling. In the second part I have, perhaps somewhat rashly, endeavoured to give a corrected host-list of the parasites. It would be quite useless to repeat Kellogg's host-lists, since they contain so many

\* Occ. Pap. Calif. Acad. Sci., 1931, XVIII, pp. 1-299.

obvious records of stragglers. Under each parasite, in the earlier part of the paper I have suggested the probable true hosts of each parasite and the host-list is made up for the most part from my suggestions. There are cases where I have refrained from expressing any opinion as to the host. In the case of the *Geospiza* spp., *Nesomimus* spp., *Cactospiza* spp., *Certhidea* spp., etc., it is at present almost impossible to say which are their true parasites, so I have listed nearly all the lice recorded from them. A few of the birds from which Kellogg and his associates recorded Mallophaga have created some difficulty in their interpretation. I am not prepared to say what they meant by *Fregata aquila*, for instance, so I have merely interpreted it as *Fregata* sp. A number of parasites are recorded from *Anas versicolor*. According to Swarth (1931) there is only a single record of the capture of this bird on the islands, and even that is open to doubt. The bird is an Argentine species. Only two species of Anatidae are listed as occurring in the Galapagos Is., *Querquedula discors* (Linn.) and *Pacclonetta galapagensis* Ridgway. The former species is listed on the basis of a single specimen. It seems, therefore, probable that Kellogg's records from *Anas versicolor* really refer to *Pacclonetta galapagensis* Ridgway, which has been recorded on numerous occasions from all the islands except Narborough. There are records of Mallophaga from *Speotyto* sp. and *Corvus* sp., but I can find no reference to any such birds from the Galapagos Is.

#### SPECIES PARASITIC ON DOMESTIC ANIMALS.

##### 1. *Menopon gallinae* (Linn.).

*Pediculus gallinae* Linn., 1758, Syst. Nat., p. 613.

*P. trigonocephalus* v. Olfers, 1816, De vegetativis et animatis corporibus in corporibus animatis reperiundis commentarius, Berlin, Pt. I, p. 90.

*Menopon pallidum* Nitzsch in Burmeister, 1838, Handbuch der Entomologie, ii, p. 440.

*M. gallinae* (Linn.), Ferris, 1924, Parasitology, XVI, p. 57, f. 1.

This is a common parasite of the domestic fowl, which is its true host. Jepson (1911, Rept. Econ. Entom., Dept. Agric. Fiji, Council Paper 25, p. 30) recorded it on fowls in Fiji. Buxton (1918, Researches in Polynesia and Melanesia, London, p. 54) and Waterston (1928, Insects of Samoa, Pt. VII, fasc. 3, p. 83) recorded it from domestic fowls at Apia, Samoa. Ellingworth (1928, Proc. Hawaiian ent. Soc., VII, p. 41) recorded it from turkey and guinea hen at Honolulu and from chicken at Waipio and Honolulu.

2. *Menopon phaeostomum* Nitzsch.

*Menopon phaeostomum* Nitzsch in Giebel, 1866, *Z. ges. Naturw.* XXVIII, p. 391.

The true host of this species is the peacock. Illingworth (1928, Proc. Hawaiian ent. Soc., VII, p. 41) recorded it from a guinea-hen at Honolulu.

3. *Eomenacanthus stramineus* (Nitzsch).

*Menopon stramineum* Nitzsch in Giebel, 1874, *Insecta Epizoa*, p. 291.

*M. biseriatum* Piaget, 1880, *Les Pédiculines*, p. 469, Pl. 37, f. 2.  
*Eomenacanthus biseriatus* (Piaget), Uchida, 1926, *J. Coll.*

*Agric.*, Tokyo, IX, p. 30.

This common parasite occurs on both chicken and turkeys. Illingworth (1928, Proc. Hawaiian ent. Soc., VII, p. 41) recorded it from chicken at Honolulu.

4. *Trichodectes canis* (De Geer).

*Ricinus canis* De Geer, 1778, *Mémoires pour servir à l'histoire des Insectes*, Stockholm, VII, p. 81, Pl. 4, f. 16.

*Trichodectes latus* Nitzsch in Burmeister, 1838, *Handbuch der Entomologie*, ii, p. 436.

This species is the true parasite of domestic dogs. Swezey (1931, Proc. Hawaiian ent. Soc., VII, p. 361) recorded it from a dog in Honolulu.

5. *Bovicola* spp.

There has been so much confusion regarding the lice of goats that it would be unsafe to say which species as at present recognised are referred to by past records. The *Trichodectes* spp. occurring on goats are now placed in the genus *Bovicola*.

Jepson (1911, Rept. Econ. Entom., Dept. Agric., Fiji, Council Paper 25, p. 30) recorded *Trichodectes climax* Nitzsch from goats in Fiji. Johnston and Harrison (1912, Trans. N.Z. Inst., XLIV, p. 373) recorded *T. climax* Nitzsch from domestic goats on the Kermadec Is.

6. *Goniodes dissimilis* Nitzsch.

*Goniodes dissimilis* Nitzsch in Denny, 1842, *Monographia Anoplurorum Britanniae*, p. 162, Pl. 12, f. 4.

Another common parasite of domestic fowls. Jepson (1911, Rept. Econ. Entom., Dept. Agric., Fiji, Council Paper 25, p. 30) recorded it as common on fowls in Fiji. Buxton (1928, Researches in Polynesia and Melanesia, London, p. 54) and Waterston (1928,

Insects of Samoa, Pt. VII, fasc. 3, p. 83) recorded it from domestic fowls at Apia, Samoa.

7. *Goniodes meleagridis* (Linn.).

*Pediculus meleagridis* Linn., 1758, *Syst. Nat.*, p. 613.

*Goniodes stylifer* Nitzsch in Burmeister, 1838, *Handbuch der Entomologie*, ii, p. 432.

This species is a common parasite of turkeys. Van Dene (1909, Ann. Rept. Hawaiian Agric. Exp. St., p. 36) recorded it from turkeys on the Island of Molokai, Hawaiian Is. Swezey (1922, Proc. Hawaiian ent. Soc., V, p. 37) recorded it from a turkey. Illingworth (1928, Proc. Hawaiian ent. Soc., VII, p. 41) recorded it from chicken at Waipio, Hawaiian Is.

8. *Goniocotes gigas* Taschenberg.

*Goniocotes gigas* Taschenberg, 1879, *Z. ges. Naturw.* LI, p. 104, Pl. 1, f. 10.

This large species seems to be a normal parasite of guinea-fowls but is frequently found on domestic fowls. Illingworth (1928, Proc. Hawaiian ent. Soc., VII, p. 41) recorded it from chicken at Waipio, Hawaiian Is.

9. *Goniocotes hologaster* Nitzsch.

*Goniocotes hologaster* Nitzsch in Burmeister, 1838, *Handbuch der Entomologie*, ii, p. 431.

Another common parasite of chicken which is also found on guinea-fowls. Recorded by Illingworth (1928, Proc. Hawaiian ent. Soc., VII, p. 41) from chicken and turkeys at Honolulu.

10. *Lipeurus caponis* (Linn.).

*Pediculus caponis* Linn., 1758, *Syst. Nat.*, p. 614.

A parasite of domestic fowls. Buxton (1928, Researches in Polynesia and Melanesia, London, p. 54) and Waterston (1928, Insects of Samoa, Pt. VII, fasc. 3, p. 83) recorded it from domestic fowls at Apia, Samoa. Illingworth (1928, Proc. Hawaiian ent. Soc., VII, p. 41) recorded it from chicken in Honolulu.

11. *Lipeurus gallipavonis* (Geoffroy).

*Pediculus gallipavonis* Geoffroy, 1762, *Histoire abrégée des Insectes*, Paris, II, Pt. 2, p. 600.

This species is a parasite of turkeys, and has been recorded from these hosts in Honolulu by Illingworth (1928, Proc. Hawaiian ent. Soc., VII, p. 41).

12. *Lipeurus heterographus* Nitzsch.

*Lipeurus heterographus* Nitzsch in Giebel, 1866, *Z. ges. Naturw.* XXVIII, p. 381.

Jepson (1911, Rept. Econ. Entom., Dept. Agric. Fiji, Council Paper 25, p. 30) recorded this common parasite of domestic fowls from Fiji.

#### ANALYSIS OF MALLOPHAGA RECORDED FROM DOMESTIC ANIMALS.

Name of parasite.	Names of Islands.			
	Hawaiian Is.	Fiji Is.	Samoa.	Kermadec Is.
<i>Menopon gallinae</i> (Linn.) .....	X	X	X	—
<i>M. phaeostomum</i> Nitzsch .....	X	—	—	—
<i>Eomenacanthus stramineus</i> (Nitzsch)	X	—	—	—
<i>Trichodectes canis</i> (De Geer) .....	X	—	—	—
<i>Bovicola</i> spp. (of Goats) .....	—	X	—	X
<i>Goniodes dissimilis</i> Nitzsch .....	—	X	X	—
<i>G. meleagridis</i> (Linn.) .....	X	—	—	—
<i>Goniocotes gigas</i> Taschenberg .....	X	—	—	—
<i>G. hologaster</i> Nitzsch .....	X	—	—	—
<i>Lipeurus caponis</i> (Linn.) .....	X	—	X	—
<i>L. gallipavonis</i> (Geoffroy) .....	X	—	—	—
<i>L. heterographus</i> Nitzsch .....	—	X	—	—

(Continued from p. 189.)

#### SPECIES PARASITIC ON 'WILD' BIRDS.

##### 13. *Menopon albemarlei* Kellogg and Kuwana.

*Menopon albemarlei* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 488, Pl. 31, f. 5.

Locality: Galapagos Is., Albemarle I.

##### *Geospiza fuliginosa fuliginosa* Gould.

Locality: Galapagos Is., Albemarle I.

##### 14. *Menopon aurifasciatum* Kellogg.

*Menopon aurifasciatum* Kellogg, 1899, Occ. Pap. Calif. Acad. Sci., VI, pp. 43-44, Pl. 4, f. 5.

*M. aurifaciatum* Kellogg, Ewing, 1924, Zoologica, N.Y., V, p. 82.

Recorded host: *Fregata* sp. ? (*Fregata aquila*).

Localities: Galapagos Is.

##### 15. *Menopon becki* Kellogg.

*Menopon becki* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 322.

Recorded host: *Phaethon aethereus* Linn.

Locality: Galapagos Is., Daphne I.

##### 16. *Menopon cyrtostignum* Kellogg and Chapman.\*

\* In the case of all species referred to in the paper on the Mallophaga from Hawaiian Birds by Kellogg and Chapman I have given only the earlier references to the paper published in the Journal of the New York Entomological Society and omitted the references to the same paper which appeared in the *Fauna Hawaiana*.

*Menopon cyrtostigmum* Kellogg and Chapman, 1902, J.N.Y.

ent. Soc., X, pp. 165-166, Pl. 15, f. 3.

Recorded host: *Vestiaria coccinea* (Forster).

Localities: Hawaiian Is., Hilo, Maui I.

17. *Menopon fuscofasciatum* Piaget.

*Menopon fuscofasciatum* Piaget, 1880, Les Pédiculines Leiden, p. 492, Pl. 40, f. 9.

*M. fuscofasciatum* Piaget, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 321.

Recorded hosts: *Phaethon aethereus* Linn.; *Sula dactylatra granti* Rothschild; *Fregata* sp.; *Anous stolidus galapagensis* Sharpe.

Probable true host: *Anous stolidus galapagensis* Sharpe.

Localities: Galapagos Is., Daphne I., Indefatigable I., Seymour I., Wenman I.

18. *Menopon galapagensis* Kellogg and Kuwana.

*Menopon galapagensis* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 487-488, Pl. 31, f. 4.

Recorded hosts: *Geospiza conirostris conirostris* Ridgway; *Nesomimus macdonaldi* Ridgway.

Locality: Galapagos Is., Hood I.

19. *Menopon hawaiiensis* Kellogg and Chapman.

*Menopon hawaiiensis* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, p. 165, Pl. 15, f. 2.

Recorded host: *Chlorodrepanis virens* (Gmelin).

Locality: Hawaiian Is., Maui I.

20. *Menopon hilensis* Kellogg and Chapman.

*Menopon hilensis* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, pp. 166-167, Pl. 15, f. 4.

Recorded host: *Vestiaria coccinea* (Forster).

Locality: Hawaiian Is., Hilo.

21. *Menopon incertum* Kellogg, 1896, Proc. Calif. Acad. Sci., VI,

Ser. 2, pp. 533-534, Pl. 73, f. 2.

*M. incertum* Kellogg, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 488-498.

*M. incertum* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 322.

Recorded hosts: *Certhidea olivacea* Gould; *C. becki* Rothschild; *Geospiza f. fuliginosa* Gould; *G. c. conirostris* Ridgway;

*G. fortis* Gould; *Nesomimus p. parvulus* (Gould); *N. macdonaldi* Ridgway; *N. parvulus barringtoni* Rothschild; *N. melanotis* (Gould); *Cactospiza pallida producta* (Ridgway); *Camarhynchus parvulus salvini* Ridgway; *Platyspiza crassirostris* (Gould) (*Camarhynchus variegatus*); \**Progne modesta* (Neboux); \**Actitis macularia* (Linn.); \**Oceanites gracilis galapagoensis* Lowe; *Procelaria tethys* (Bonaparte); \**Anous stolidus galapagensis* Sharpe; \**Sterna fuscata crissalis* Lawrence (*Sterna fuliginosa*).

Probable true hosts: All the above save those asterisked\*.

Localities: Galapagos Is., Albemarle I., Narborough I., Chat-ham I., Gardner I., Barrington I., Wenman I., Clipperton I., Bindloe I., James I., Indefatigable I.

22. *Menopon narboroughi* Kellogg and Kuwana.

*Menopon narboroughi* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 485-486, Pl. 31, f. 2.

*M. narboroughi* Kellogg and Kuwana, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 322.

Recorded hosts: *Butorides sundevalli* Reichnow; *Puffinus obscurus subalaris* Ridgway; *Sula dactylatra granti* Rothschild; *Anous stolidus galapagensis* Sharpe.

Probable true host: *Puffinus obscurus subalaris* Ridgway.

Localities: Galapagos Is., Narborough I., Culpepper I., Bindloe I.

23. *Menopon navigans* Kellogg.

*Menopon navigans* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, Ser. 2, pp. 156-157, Pl. 14, f. 4, 5.

*M. navigans* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 322.

*M. navigans* Kellogg, Ewing, 1924, Zoologica, N.Y., V, p. 82.

Recorded hosts: *Sula dactylatra granti* Rothschild; *S. nebulosus* Milne-Edwards.

Localities: Galapagos Is.

24. *Menopon numerosum* Kellogg.

*Menopon numerosum* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, Ser. 2, pp. 159-160, Pl. 15, f. 1.

*M. numerosum* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 321.

Recorded host: *Puffinus obscurus subalaris* Ridgway.

Locality: Galapagos Is., Seymour I.

25. *Menopon singularis* Kellogg and Kuwana.

*Menopon singularis* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 485, Pl. 31, f. 1.

*M. singularis* Kellogg and Kuwana, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 321.

*M. singularis* Kellogg and Kuwana, Ferris, 1932, Bull. Bishop Mus., Honolulu, 98, p. 59, f. 11.

Recorded hosts: *Anous stolidus galapagensis* Sharpe; *Phaëthon aethereus* Linn.; *Sula dactylatra granti* Rothschild; *S. nebulosus* Milne-Edwards; *Sterna fuscata crissalis* Lawrence; *Fregata minor* (Lesson).

Probable true hosts: *Anous stolidus galapagensis* Sharp; *Sterna fuscata crissalis* Lawrence.

Localities: Galapagos Is., Clipperton I., Culpepper I., Wenman I., Seymour I., Bindloe I.; Marquesas Is., Hatutu.

26. *Menopon snodgrassi* Kellogg and Kuwana.

*Menopon snodgrassi* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 486-487, Pl. 31, f. 3.

Recorded host: *Coccyzus melacoryphus* Vieillot.

Locality: Galapagos Is., Chatham I.

27. *Menopon sternophilum* Ferris.

*Menopon sternophilum* Ferris, 1932, Bull. Bishop Mus., Honolulu, 98, p. 59, f. 12.

Recorded host: *Onychoprion fuscatus* Linn. (*Sterna fuscata*).

Locality: Marquesas Is., Teuaua, off Uahuka.

28. *Colpocephalum angulaticeps* Piaget.

*Colpocephalum angulaticeps* Piaget, 1880, Les Pédiculines, Leiden, p. 569, Pl. 47, f. 8.

*C. spineum* Kellogg, 1899, Occ. Pap. Calif. Acad. Sci., VI, pp. 38-39, Pl. 4, f. 1.

*C. spineum* Kellogg, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 484.

*C. spineum* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 320.

*C. angulaticeps* Piaget, Ferris, 1932, Bull. Bishop Mus., Honolulu, 98, p. 54, f. 8.

Recorded hosts: *Anous stolidus galapagensis* Sharpe; *Geospiza f. fuliginosa* Gould; *Puffinus obscurus subalaris* Ridgway; *Sula piscator websteri* Rothschild; *Fregata* sp. (*Fregata aquila*); *F. minor* (Lesson) (*F. minor*).

Probable true host: *Fregata* spp.

Localities: Galapagos Is., Clipperton I., Albemarle I., Wenman I., Clarion I.; Marquesas Is., Atuona, Hivaaoa.

29. *Colpocephalum brachysomum* Kellogg and Chapman.

*Colpocephalum brachysomum* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, 162-163, Pl. 14, f. 3.

Recorded hosts: ? *Asio flammeus* (Pontopp.) (*Asio accipitrinus*); *Pluvialis dominicus fulvus* (Gmelin) (*Charadrius dominicus fulvus*).

Probable true host: *Asio flammeus* (Pontopp.).

Localities: Hawaiian Is., Maui I., Tao Valley, Kahului.

30. *Colpocephalum discrepans* Kellogg and Chapman.

*Colpocephalum discrepans* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, pp. 164-165, Pl. 15, f. 1.

Recorded hosts: ' *Carpodacus mexicanus obscurus*'; *Anous stolidus* (Linn.).

Locality: Hawaiian Is., Maui I., Kahului.

31. *Colpocephalum flavescens* Nitzsch.

*Colpocephalum flavescens* Nitzsch in Lyonet, 1829, Mém. du Mus., XVIII, p. 262, Pl. 12.

*C. flavescens* Nitzsch, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 321.

Recorded hosts: *Buteo galapagoensis* Ridgway; *Fregata* sp.

Probable true host: *Buteo galapagoensis* Ridgway.

Localities: Galapagos Is., Indefatigable I., Wenman I.

32. *Colpocephalum heterosoma* Piaget.

*Colpocephalum heterosoma* Piaget, 1880, Les Pédiculines, Leiden, p. 572, Pl. 48, f. 3, 4.

*C. heterosoma* Piaget, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 321.

Recorded host: *Progne modesta* (Neboux).

Probable true host: *Phoenicopterus ruber* Linn.

Locality: Galapagos Is., Indefatigable I.

33. *Colpocephalum subaequale* Nitzsch.

*Colpocephalum subaequale* Nitzsch in Burmeister, 1838, Handbuch der Entomologie, ii, p. 438.

*C. semicinctum* Rudow, 1866, Z. ges. Naturw., XXVII, p. 471.

*C. subaequale* Nitzsch, Kellogg, 1906, XXXII, p. 321.

Recorded hosts: *Sula piscator websteri* Rothschild; *Fregata* sp. (*F. aquila*); *Corvus* sp.

- Probable true host: *Corvus* sp.  
 Locality: Galapagos Is., Clarion I.
34. *Colpocephalum unciferum* Kellogg.  
*Colpocephalum unciferum* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, Ser. 2, pp. 140-142, Pl. 12, f. 1, 2, 3.  
*C. unciferum* Kellogg, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 484.  
*C. unciferum* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 321.  
*C. unciferum* Kellogg, Ewing, 1924, Zoologica, N.Y., V, p. 82.  
 Recorded hosts: *Certhidea olivacea* Gould; *Sula dactylatra granti* Rothschild; *Fregata* sp. (*Fregata aquila*); *Anous stolidus galapagensis* Sharpe; 'Anas versicolor'; *Pelecanus occidentalis* Linn. (*Pelecanus* sp.).  
 Probable true host: *Pelecanus occidentalis* Linn.  
 Localities: Galapagos Is., Albemarle I., Wenman I.
35. *Actornithophilus epiphanes* (Kellogg and Chapman).  
*Colpocephalum epiphanes* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, pp. 161-162, Pl. 14, f. 2.  
*Actornithophilus epiphanes* Kellogg and Chapman, Ferris, 1916, Canad. Ent., XLVIII, p. 304.  
 Recorded host: *Anous stolidus* (Linn).  
 Locality: Hawaiian Is., Maui I., Kahului.
36. *Actornithophilus grandiceps* (Piaget).  
*Colpocephalum grandiceps* Piaget, 1880, Les Pédiculines, Leiden, p. 558, Pl. 46, f. 7.  
*C. grandiceps* Piaget, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 321.  
*Actornithophilus grandiceps* (Piaget), Ferris, 1916, Canad. Ent., XLVIII, p. 304.  
 Recorded host: *Haematopus palliatus galapagensis* Ridgway.  
 Locality: Galapagos Is., Indefatigable I.
37. *Actornithophilus kilauensis* (Kellogg and Chapman).  
*Colpocephalum kilauensis* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, p. 161, Pl. 14, f. 1.  
*Actornithophilus kilauensis* (Kellogg and Chapman), Ferris, 1916, Canad. Ent., XLVIII, p. 161.  
 Recorded host: *Heteractitis incanus* (Gmelin).  
 Locality: Hawaiian Is., Hilo.
38. *Actornithophilus milleri* (Kellogg and Kuwana).
- 1938.]
- Colpocephalum milleri* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 483-484, Pl. 30, f. 6.  
*C. milleri* Kellogg and Kuwana, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 321.  
*C. milleri* Kellogg and Kuwana, Uchida, 1918, Annot. Zool. Jap., IX, p. 488.  
*Actornithophilus milleri* (Kellogg and Kuwana), Ferris, 1916, Canad. Ent., XLVIII, p. 304.  
*A. milleri* (Kellogg and Kuwana), Ferris, 1935, Bull. Bishop Mus., Honolulu, 113, pp. 7-9, f. 1, 2.  
 Recorded hosts: *Anous stolidus galapagensis* Sharpe; *Butorides sundevalli* Reichenow; *Camarhynchus affinis* Ridgway; *Geospiza f. fuliginosa* Gould; *G. fortis* Gould; *Phaëthon aethereus* Linn.; *Sula dactylatra granti* Rothschild; *S. nebouxii* Milne-Edwards; *Nesopelia g. galapagoensis* (Gould); *Anous stolidus* (Linn.); *Gygis terna sumatrana* (Raffles) (*Sterna melanuchen*).  
 Probable true host: *Anous stolidus* (Linn.).  
 Localities: Galapagos Is. Clipperton I., Narborough I., Albemarle I., Bindloe I., Wenman I., Seymour I.; Ponape Is.; Tahiti, Hitiaa.
39. *Actornithophilus timidus* (Kellogg).  
*Colpocephalum timidum* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, Ser. 2, pp. 145-147, Pl. 12, f. 6.  
*C. timidum* Kellogg, Johnston and Harrison, 1912, Trans. N.Z. Inst., XLIV, p. 364.  
*Actornithophilus timidus* (Kellogg), Ferris, 1916, Canad. Ent., XLVIII, p. 304.  
*A. timidus* (Kellogg), Waterston, 1928, Insects of Samoa, Pt. VII, fasc. 3, p. 81.  
 Recorded host: *Pluvialis dominicus fulvus* (Gmelin).  
 Localities: Kermadec Is.; Samoa, Upolu, Apia.
40. *Eomenopon denticulatum* Harrison.  
*Eomenopon denticulatum* Harrison, 1915, Parasitology, VII, pp. 385-388, f. 5, 6 and 16.  
*E. denticulatum* Harrison, Uchida, 1926, J. Coll. Agric., Tokyo, IX, p. 31.  
*E. denticulatum* Harrison, Waterston, 1928, Insects of Samoa, Pt. VII, fasc. 3, p. 78.  
 Recorded hosts: 'Eos rubiginosa'; *Vini australis* (Gmelin).  
 Localities: Ponape I.; Samoa, Apia, Vailele.

(Continued from Vol. LXXIV, p. 208)

41. *Myrsidea buxtoni* Waterston.

*Myrsidea buxtoni* Waterston, 1928, Insects of Samoa, Pt. VII, fasc. 3, 79-80, f. 1, 2a.

Recorded host: *Aplonis atrifusca* (Peale).

Locality: Samoa, Apia.

42. *Myrsidea conspicua* (Kellogg and Chapman).

*Colpocephalum conspicuum* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, pp. 163-164, Pl. 14, f. 4.

*Myrsidea conspicua* (Kellogg and Chapman), Ferris, 1916, Canad. Ent., XLVIII, p. 308.

Recorded host: '*Carpodacus mexicanus obscurus*'.

Locality: Hawaiian Is., Maui I., Olai, Kahului.

43. *Myrsidea invadens* (Kellogg and Chapman).

*Menopon invadens* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, p. 167, Pl. 15, f. 5.

*M. invadens* Kellogg and Chapman, Kellogg and Paine, 1910, Ent. News., XXI, p. 125.

*Myrsidea invadens* (Kellogg and Chapman), Ferris, 1916, Canad. Ent., XLVIII, p. 308.

*M. invadens* (Kellogg and Chapman), Ferris, 1932, Bull. Bishop Mus., Honolulu, 98, pp. 10-11, f. 3, 4.

Recorded hosts: '*Acridotheres tristis*'; *Spilopelia chinensis* (Scop.) (*Turtur chinensis*).

Probable true host: '*Acridotheres tristis*'.

Localities: Hawaiian Is., Maui I.; Tahiti, Hitiaa.

44. *Myrsidea rustica* (Nitzsch).

*Menopon rusticum* Nitzsch in Giebel, 1874, Ins. Epiz., p. 288.

*M. rusticum* Nitzsch, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 322.

*Myrsidea rustica* (Nitzsch), Harrison, 1916, Parasitology, IX, p. 59.

Recorded host: *Progne modesta* (Neboux).

Locality: Galapagos Is., Indefatigable I.

45. *Myrsidea teraokai* Uchida.

*Myrsidea teraokai* Uchida, 1918, Annot. Zool. Jap., IX, pp. 490-491, f. 1.

*M. teraokai* Uchida, 1926, J. Coll. Agr., Tokyo, IX, p. 17.

*M. teraokai* Uchida, Waterston, 1928, Insects of Samoa, VII, fasc. 3, p. 78, f. 2b.

Recorded host: *Aplonis opaca* (Kittl.).

Locality: Caroline Is., Truk I.

46. *Dennyus distinctus* Ferris.

*Dennyus distinctus* Ferris, 1916, Canad. Ent., XLVIII, pp. 310-311, f. 15.

*D. distinctus* Ferris, 1932, Bull. Bishop Mus., Honolulu, 98, pp. 56-57, f. 9-10.

Recorded host: *Colloccalia ocista* Oberholser.

Localities: Marquesas Is., Uahuka, Vaipae Valley.

47. *Trinoton lituratum* Nitzsch.

*Trinoton lituratum* Nitzsch in Burmeister, 1838, Handbuch der Entomologie, ii, p. 441.

*T. lituratum* Nitzsch, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 320.

Recorded host: '*Anas versicolor*'.

Locality: Galapagos Is., Indefatigable I.

48. *Trinoton querquedulae* (Linn.).

*Pediculus querquedulae* Linn., 1758, Syst. Nat., p. 612.

*Trinoton luridum* Nitzsch in Burmeister, 1838, Handbuch der Entomologie, ii, p. 441.

*T. querquedulae* (Linn.), Harrison, 1916, Parasitology, IX, p. 62.

Recorded hosts: '*Anas versicolor*'; *Haematopus palliatus galapagensis* Ridgway (*Haematopus galapagoensis*).

Probable true host: ?*Poecilonetta galapagensis* Ridgway.

Locality: Galapagos Is., Indefatigable I.

49. *Ancistrona vagelli* (Fabricius).

*Pediculus vagelli* Fabr., 1787, Mant. Ins., p. 369.

*Ancistrona procellariae* Westwood, 1874, Thes. ent. Oxon., p. 197, Pl. 37, f. 4.

*A. gigas* Piaget, 1883, Tijdschr. ent., XXVI, p. 152, Pl. 9, f. 1.

*A. gigas* Piaget, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 483.

*A. gigas* Piaget, Kellogg and Paine, 1910, Ent. News, XXI, p. 125.

*A. procellariae* Westwood, Johnston and Harrison, 1912, Trans. N.Z. Inst., XLIV, pp. 364-365.

Recorded hosts: *Cookilaria hypoleuca* (Salvin) (*Aestrelata hypoleuca*); ? *Pelagodroma marina passerina* (Mathews) (*Pelagodroma marina*).

Localities: Galapagos Is.\*; Laysan I.; Kermadec Is.

50. *Ricinus angulatus* (Kellogg).

*Physostomum angulatum* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, p. 515, Pl. 70, f. 5.

*P. angulatum* Kellogg, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 483.

*Ricinus angulatus* (Kellogg), Harrison, 1916, Parasitology, IX, p. 66.

Recorded hosts: *Myiarchus magnirostris* (Gray); *Dendroica petechia aureola* (Gould).

Locality: Galapagos Is., Albemarle I.

51. *Goniocotes chinensis* Kellogg and Chapman.

*Goniocotes chinensis* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, p. 160, Pl. 12, f. 5.

Recorded host: *Spilopelia chinensis* (Scop.).

Locality: Hawaiian Is., Maui I.

52. *Goniocotes galapagensis* Kellogg and Kuwana.

*Goniocotes galapagensis* Kellogg and Kuwana, 1906, Proc. Wash. Acad. Sci., IV, pp. 481-482, Pl. 30, f. 5.

*G. galapagensis* Kellogg and Kuwana, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 320.

Recorded hosts: *Cactospiza pallida producta* (Ridgway); *G. f. fuliginosa* Gould; *Oceanites gracilis galapagoensis* Lowe; *Fregata* sp.; *Sula piscator websteri* Rothschild; *Anous stolidus galapagensis* Sharpe; *Nesopelia g. galapagoensis* (Gould).

\* The host from which this species was recorded from the Galapagos Is. was not stated by Kellogg and Kuwana (1902).

Probable true host: *Nesopelia galapagoensis* (Gould).

Localities: Galapagos Is., Albemarle I., Narborough I., Wrenman I., Bindloe I.

53. *Lipeurus minhaensis* Kellogg and Chapman.

*Lipeurus docophoroides minhaensis* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., V, pp. 159-160.

Recorded host: 'Acridoheres tristis.'

Locality: Hawaiian Is., Maui I., Lahaina.

NOTE.—The host given by Kellogg and Chapman is not the true host.

54. *Philopterus armatus* Johnston and Harrison.

*Philopterus armatus* Johnston and Harrison, 1912, Trans. N.Z. Inst., XLIV, pp. 370-372, f. 7-10.

Recorded host: *Phaeopus phaeopus variegatus* (Scop.).

Locality: Kermadec Is.

55. *Philopterus breviformis* (Kellogg and Kuwana).

*Docophorus breviformis* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 463-464, Pl. 28, f. 3.

*D. breviformis* Kellogg and Kuwana, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 317.

*Philopterus breviformis* (Kellogg and Kuwana), Harrison, 1916, Parasitology, IX, p. 89.

*P. breviformis* (Kellogg and Kuwana), Ewing, 1924, Zool. N.Y., V, p. 82.

Recorded hosts: *Progne modesta* (Neboux); *Geospiza fortis* Gould; *Actitis macularia* (Linn.).

Probable true host: *Progne modesta* (Neboux).

Localities: Galapagos Is., Albemarle I., Indefatigable I.

56. *Philopterus conicus* (Denny).

*Docophorus conicus* Denny, 1842, Monographia Anoplurorum Britanniae, p. 90, Pl. 5, f. 2.

*D. fuliginosus* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, Ser. 2, pp. 80-82, Pl. 3, f. 2.

*D. fuliginosus hawaiiensis* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, p. 157.

*Philopterus wallacei* Johnston and Harrison, 1912, Trans. N.Z. Inst., XLIV, pp. 369-370, f. 5, 6.

*P. conicus* (Denny), Harrison, 1916, Parasitology, IX, p. 92.

Recorded hosts: *Pluvialis dominicus fulvus* (Gmelin); *Heteracatis incanus* (Gmelin).

Localities: Hawaiian Is., Hilo, Maui I.; Kermadec Is.

57. *Philopterus corvi* (Osborn).

*Docophorus corvi* Osborn, 1896, Div. Ent., U.S. Dept. Agric., Bull. 5 (n.s.), pp. 220-221, f. 142.  
*D. corvi* Osborn, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 317.

Recorded host: *Corvus* sp.

Locality: Galapagos Is., Clarion I.

NOTE: As has been previously pointed out by Harrison (1916) Osborn's *P. corvi* needs renaming if it is distinct from *P. corvi* (Linn.).

58. *Philopterus cursor* (Nitzsch).

*Docophorus cursor* Nitzsch in Burmeister, 1838, Handbuch der Entomologie, ii, p. 426.  
*D. cursor* Nitzsch, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 317.  
*Philopterus cursor* (Nitzsch), Harrison, 1916, Parasitology, IX, p. 92.

Recorded host: *Asio galapagoensis* (Gould).

Locality: Galapagos Is., Clarion I.

59. *Philopterus domesticus* (Kellogg).

*Docophorus domesticus* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, Ser. 2, pp. 475-476, Pl. 65, f. 4.  
*D. domesticus* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 317.  
*Philopterus domesticus* (Kellogg), Harrison, 1916, Parasitology, IX, p. 317.

Recorded host: *Progne modesta* (Neboux).

Locality: Galapagos Is., Indefatigable I.

60. *Philopterus galapagensis* (Kellogg and Kuwana).

*Docophorus galapagensis* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 464-465, Pl. 28, f. 4.  
*D. galapagensis* Kellogg and Kuwana, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 317.  
*Philopterus galapagensis* (Kellogg and Kuwana), Harrison, 1916, Parasitology IX, p. 95.

Recorded hosts: *Geospiza f. fuliginosa* (Gould); *G. c. conirostris* Ridgway; *G. fortis* Gould; *Cactospiza pallida producta* (Ridgway); *Camarhynchus prosthemelas* Sclater and Salvin; *Nesomimus parvulus* (Gould).

Localities: Galapagos Is., Albemarle I., Chatham I., Narborough I., Indefatigable I.

61. *Philopterus insulicola* (Kellogg and Kuwana).

*Docophorus insulicola* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 466-467, Pl. 28, f. 6.  
*Philopterus insulicola* (Kellogg and Kuwana), Harrison, 1916, Parasitology, IX, p. 97.

Recorded hosts: *Certhidea olivacea* Gould; *Pyrocephalus nanus intercedens* Ridgway; *Geospiza fuliginosa* subsp.

Locality: Galapagos Is., Albemarle I.

62. *Philopterus macgregori* (Kellogg and Chapman).

*Docophorus macgregori* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, pp. 156-157, Pl. 13, f. 1.

Recorded host: *Chlorodrepanis virens* (Gmelin).

Locality: Hawaiian Is., Maui I., Kahului and Ias Valley.

(

(To be continued)

(Continued from p. 18)

63. *Philopterus minor* (Kellogg and Kuwana).  
*Docophorus validus minor* Kellogg and Kuwana, 1902, Proc.  
Wash. Acad. Sci., IV, pp. 460-461.  
*D. validus minor* Kellogg and Kuwana, Kellogg, 1906,  
Trans. Amer. ent. Soc., XXXII, p. 316.  
*Philopterus minor* (Kellogg and Kuwana), Harrison, 1916,  
Parasitology, IX, p. 99.  
Recorded hosts: *Puffinus obscurus subalaris* Ridgway;  
*Nesomimus parvulus barringtoni* Rothschild.  
Probable true host: *Puffinus obscurus subalaris* Ridgway.  
Localities: Galapagos Is., Narborough I., Albemarle I., Bar-  
rington I., Culpepper I.
64. *Philopterus numeniicola* Johnston and Harrison.  
*Philopterus numeniicola* Johnston and Harrison, 1912,  
Trans. N.Z. Inst., XLIV, pp. 372-373, f. 11, 12.  
Recorded host: *Phaeopus phaeopus variegatus* (Scop.).  
Locality: Kermadec Is.
65. *Philopterus platycephalus* (Kellogg and Kuwana).  
*Docophorus platycephalus* Kellogg and Kuwana, 1902, Proc.  
Wash. Acad. Sci., IV, pp. 461-462, Pl. 28, f. 1.  
*D. platycephalus* Kellogg and Kuwana, Kellogg, 1906,  
Trans. Amer. ent. Soc. XXXII, p. 316.  
*Philopterus platycephalus* (Kellogg and Kuwana), Harrison,  
1916, Parasitology, IX, p. 102.  
Recorded hosts: *Oceanites gracilis galapagoensis* Lowe;  
*Geospiza f. fuliginosa* Gould.  
Probable true host: *Oceanites gracilis galapagoensis* Lowe.  
Localities: Galapagos Is., Albemarle I., Wenman I.
66. *Philopterus sturni* (Schrank).  
*Pediculus sturni* Schrank, 1776, Beyträge zur Naturges-  
chichte, p. 118, Pl. 5, f. 11.  
*Docophorus leontodon* Nitzsch in Burmeister, 1838, Hand-  
buch der Entomologie, ii, p. 425.  
*Philopterus leontodon* (Nitzsch), Johnston and Harrison,  
1912, Trans. N.Z. Inst., XLIV, p. 368.  
Recorded host: *Sturnus vulgaris* Linn.  
Locality: Kermadec Is.

67. *Philopterus subflavescens* (Geoffroy).  
*Pediculus subflavescens* Geoffroy, 1762, Hist. Abr. Ins. ii,  
p. 599.  
*Docophorus communis* Nitzsch in Burmeister, 1838, Hand-  
buch der Entomologie, ii, p. 425.  
*D. communis* Nitzsch, Kellogg and Kuwana, 1902, Proc.  
Wash. Acad. Sci., IV, p. 464.  
*D. communis* Nitzsch, Kellogg and Chapman, 1902, J.N.Y.  
ent. Soc., X, p. 156.  
*Philopterus subflavescens* (Geoffroy), Harrison, 1916, Para-  
sitology, IX, p. 105.  
Recorded hosts: *Geospiza f. fuliginosa* Gould; *Geospiza* sp.;  
*Carpodacus mexicanus obscurus*?; ? *Uroloncha punctulata nisoria*  
(Temm. and Lang.) (*Munia nisoria*).  
Localities: Galapagos Is., Narborough I., Hood I.; Hawaiian  
Is., Maui I.
68. *Philopterus syrnii* (Packard).  
*Docophorus syrnii* Packard, 1872, Ann. Rept. U.S. Geol.  
Surv., pp. 733-734, f. 62.  
*D. speotyi* Osborn, 1896, Div. of Ent., U.S. Dept. Agr.  
Bull. 5 (n.s), pp. 222-223, f. 144.  
*D. speotyi* Osborn, Kellogg, 1906, Trans. Amer. ent. Soc.,  
XXXII, p. 317.  
*Philopterus syrnii* (Packard), Harrison, 1916, Parasitology,  
IX, p. 105.  
Recorded host: *Speotyo* sp.  
Locality: Galapagos Is.?
69. *Philopterus taurocephalus* (Kellogg).  
*Docophorus taurocephalus* Kellogg, 1896, Proc. Calif. Acad.  
Sci., VI, Ser. 2, pp. 471-473, Pl. 65, f. 1.  
*D. taurocephalus* Kellogg, 1906, Trans. Amer. ent. Soc.  
XXXII, p. 316.  
*Philopterus taurocephalus* (Kellogg), Harrison, 1916, Para-  
sitology, IX, p. 105.  
Recorded host: *Puffinus obscurus subalaris* Ridgway.  
Probable true host: *Buteo galapagoensis* (Gould).  
Locality: Galapagos Is., Culpepper I.
70. *Saemundssonia albemarlensis* (Kellogg and Kuwana).  
*Docophorus albemarlensis* Kellogg and Kuwana, 1902, Proc.  
Wash. Acad. Sci., IV, pp. 465-466, Pl. 28, f. 5.  
*D. albemarlensis* Kellogg and Kuwana, Kellogg, 1906,  
Trans. Amer. ent. Soc., XXXII, p. 316.

*Philopterus albemarlensis* (Kellogg and Kuwana), Harrison, 1916, Parasitology, IX, p. 87.

Recorded hosts: *Camarhynchus affinis* Ridgway; *Phaethon aethereus* Linn.; *Sterna fuscata crissalis* (Lawrence).

Probable true host: *Sterna fuscata crissalis* (Lawrence).

Localities: Galapagos Is., Albemarle I., Seymour I., Culpepper I.

71. *Saemundssonia gonothorax* (Giebel).

*Docophorus gonothorax* Giebel, 1871, Z. ges. Naturw., XXXVII, p. 450.

*Pediculus lari* O. Fabricius, 1780, Fauna Groenlandica, p. 219.

*Docophorus lari* Denny, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 463.

*D. lari* Denny, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 317.

*Philopterus gonothorax* (Giebel), Harrison, 1916, Parasitology, IX, p. 95.

*Saemundssonia gonothorax* (Giebel), Timmermann, 1936, Zool. Anz., Bd. 114, pp. 97-100, f. 1a.

Recorded host: *Creagrus furcatus* (Neboux).

Locality: Galapagos Is., Culpepper I.

72. *Saemundssonia melanocephala* (Nitzsch).

*Docophorus melanocephalus* Nitzsch in Burmeister, 1838, Handbuch der Entomologie, ii, p. 426.

*D. melanocephalus* Burmeister, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 462.

*D. melanocephalus* Burmeister, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 316.

*Philopterus melanocephalus* (Nitzsch in Burmeister), Harrison, 1916, Parasitology, IX, p. 99.

*P. melanocephalus* (Nitzsch), Timmermann, 1935, Zool. Anz., Bd. 114, p. 98.

Recorded hosts: *Sterna fuscata crissalis* (Lawrence); *Anous stolidus galapagensis* Sharpe; *Creagrus furcatus* (Neboux); *Nesomimus macdonaldi* Ridgway.

Probable true hosts: *Sterna fuscata crissalis* (Lawrence); *Anous stolidus galapagensis* Sharpe; *Creagrus furcatus* (Neboux).

Localities: Galapagos Is., Clipperton I., Narborough I., Gardner I., Wenman I., Culpepper I.

73. *Saemundssonia peristictus* (Kellogg and Kuwana).

*Docophorus peristictus* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 462-463, Pl. 28, f. 2.

*D. peristictus* Kellogg and Kuwana, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 316.

*Philopterus peristictus* (Kellogg and Kuwana), Harrison, 1916, Parasitology, IX, p. 101.

Recorded hosts: *Sterna fuscata crissalis* (Lawrence); *Dendroica petechia aureola* (Gould); *Nesomimus parvulus barringtoni* Rothschild; *Puffinus obscurus subalaris* Ridgway.

Probable true host: *Sterna fuscata crissalis* (Lawrence).

Localities: Galapagos Is., Clipperton I., Albemarle I., Seymour I.

74. *Saemundssonia phaethonus* (Howard).

*Docophorus phaethonus* Howard, 1890, Proc. U.S. nat. Mus., XII, p. 189.

*D. phaethonus* Osborn, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 316.

*Philopterus phaethonus* (Osborn), Harrison, 1916, Parasitology, IX, p. 101.

Recorded host: *Phaethon aethereus* Linn.

Localities: Galapagos Is., Daphne I., Indefatigable I., Wenman I.

75. *Saemundssonia snyderi* (Kellogg and Paine).

*Docophorus snyderi* Kellogg and Paine, 1910, Ent. News, XXI, pp. 124-125, f. 1, 2.

*Philopterus snyderi* (Kellogg and Paine), Harrison, 1916, Parasitology, IX, p. 104.

*P. snyderi* (Kellogg and Paine), Ferris, 1932, Bull. Bishop Mus., Honolulu, 98, pp. 71-72, f. 20.

Recorded hosts: *Melanosterna lunata* (Peale); *Onychoprion fuscatus* (Linn.).

Localities: Laysan I.; Marquesas Is., Hatutu.

76. *Anatoecus dentatus* (Scopoli).

*Pediculus dentatus* Scopoli, 1763, Ent. Carn., p. 383.

*Docophorus icterodes* Nitzsch in Burmeister, 1838, Handbuch der Entomologie, ii, p. 424.

*D. icterodes* Nitzsch, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 462.

*D. icterodes* Nitzsch, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 317.

*Philopterus dentatus* (Nitzsch), Harrison, 1916, Parasitology, IX, p. 93.

*Anatoecus icterodes* (Nitzsch), Cummings, 1916, Proc. Zool. Soc., Lond., pp. 655-656, f. 7B, 10, 12.  
Recorded hosts: *Sterna fuscata crissalis* (Lawrence); '*Anas versicolor*'.

Probable true host: *Poecilonetta galapagensis* Ridgway.  
Localities: Galapagos Is., Clipperton I., Indefatigable I.

77. *Degeeriella birostris* (Giebel).

*Nirmus birostris* Giebel, 1874, Insecta Epizoa, p. 174.  
*N. glorirosus* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 467-468, Pl. 29, f. 1 (part).  
*N. glorirosus* Kellogg and Kuwana, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 317.  
*N. glorirosus* Kellogg and Kuwana, Kellogg and Paine, 1910, Ent. News, XXI, p. 125.  
*N. glorirosus* Kellogg and Kuwana, Kellogg and Mann, 1912, Ent. News, XXIII, p. 58.  
*Degeeriella glorirosa* (Kellogg and Kuwana), Harrison, 1916, Parasitology, IX, p. 114.  
*D. glorirosa* (Kellogg and Kuwana), Ferris, 1932, Bull. Bishop Mus., Honolulu, 98, pp. 68-69, f. 18.  
*D. birostris* (Giebel), Bedford, 1936, Onderstepoort J. vet. Sci., VII, p. 88.

Recorded hosts: *Sterna fuscata crissalis* (Lawrence); *Anous stolidus galapagensis* Sharpe; *Geospiza f. fuliginosa* Gould; *Camarhynchus affinis* Ridgway; *Progne modesta* (Neboux); *Nesomimus parvulus barringtoni* Rothschild; *Melanosterna lunata* (Peale); *Onychoprion fuscatus* (Linn.).

Probable true hosts: *Sterna* spp. etc.

Localities: Galapagos Is., Clipperton I., Albemarle I., South Seymour I., Barrington I.; Laysan I.; Marquesas Is., Hatutu (Hatutaa).

78. *Degeeriella curvilineata* (Kellogg and Kuwana).

*Nirmus curvilineata* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 470-471, Pl. 29, f. 4.

Recorded hosts: *Nesopelia g. galapagoensis* (Gould); *Oceanites gracilis galapagoensis* Lowe.

Probable true host: ?

Localities: Galapagos Is., Narborough I., Albemarle I.

79. *Degeeriella diaprepes* (Kellogg and Chapman).

*Nirmus diaprepes* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, pp. 158-159, Pl. 13, f. 4.

Recorded host: *Vestiaria coccinea* (Forster).  
Locality: Hawaiian Is., Hilo.

80. *Degeeriella galapagensis* (Kellogg and Kuwana).

*Nirmus galapagensis* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 471-472, Pl. 29, f. 5.  
*N. galapagensis* Kellogg and Kuwana, 1906, Trans. Amer. ent. Soc., XXXII, p. 317.

Recorded hosts: *Geospiza f. fuliginosa* Gould; *G. fortis* Gould; *G. conirostris conirostris* Ridgway; *Nesomimus macdonaldi* Ridgway; *N. p. parvulus* (Gould); *N. p. barringtoni* Rothschild; *N. melanotis* Gould; *Cactospiza pallida producta* (Ridgway); *Platyspiza crassirostris* (Gould); *Pyrocephalus nanus intercedens* Ridgway; *P. dubius* Gould; *Certhidea olivacea* Gould; *Myiarchus magnirostris* (Gray); \**Coccyzus melanocoryphus* Vieillot; \**Actitis macularia* (Linn.); \**Procellaria tethys* (Bonaparte); \**Anous stolidus galapagensis* Sharpe.

Probable true hosts: All the above species except those with asterisk \*.

Localities: Galapagos Is., Albemarle I., Chatham I., Narborough I., Hood I., Barrington I., Wenman I., Indefatigable I., James I.

81. *Degeeriella interposita* (Kellogg).

*Nirmus interpositus* Kellogg, 1899, Occ. Pap. Calif. Acad. Sci., VI, pp. 23-25, Pl. 2, f. 7.  
*N. interpositus* Kellogg, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 475.

Recorded hosts: *Geospiza f. fuliginosa* Gould; *G. fortis* Gould; *Nesomimus p. parvulus* (Gould); *N. p. barringtoni* Rothschild; *Platyspiza crassirostris* (Gould).

Probable true host: *Dendroica petechia aureola* (Gould).

Localities: Galapagos Is., Albemarle I., Narborough I., Barrington I.

82. *Degeeriella lepida* (Kellogg and Kuwana).

*Nirmus lepidus* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 473-474, Pl. 29, f. 7.

Recorded hosts: *Geospiza f. fuliginosa* Gould; *Nesomimus parvulus barringtoni* Rothschild; *Sterna fuscata crissalis* (Lawrence).

Probable true host: *Sterna fuscata crissalis* (Lawrence).

Localities: Galapagos Is., Narborough I., Barrington I., Clipperton I.

(Continued from p. 76.)

83. *Degeeriella minhaensis* (Kellogg and Chapman).

*Nirmus minhaensis* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, p. 157, Pl. 13, f. 2.

Recorded host: *Acridothes tristis* (L.).

Locality: Hawaiian Is., Maui I.

84. *Degeeriella nebulosa* (Burmeister).

*Nirmus nebulosus* Burmeister, 1838, Handbuch der Entomologie, II, p. 429.

*Degeeriella nebulosa* (Burmeister), Johnston and Harrison, 1912, Trans. N.Z. Inst., XLIV, p. 368.

*D. nebulosa* (Burmeister), Harrison, 1916, Parasitology, IX, p. 118.

Recorded host: *Sturnus vulgaris* Linn.

Locality: Kermadec Is.

85. *Degeeriella obtusa* (Kellogg and Kuwana).

*Nirmus obtusus* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 468—469, Pl. XXIX, f. 2.

Recorded host: *Sterna fuscata crissalis* (Lawrence).

Locality: Galapagos Is., Clipperton I.

86. *Degeeriella oliveri* Johnston and Harrison.

*Degeeriella oliveri* Johnston and Harrison, 1912, Trans. N.Z. Inst., XLIV, p. 367, f. 3.

Recorded host: *Phaeopus phaeopus variegatus* (Scop.).

Locality: Kermadec Is.

87. *Degeeriella oraria* (Kellogg).

*Nirmus orarius* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, Ser. 2, pp. 104-105, Pl. 5, f. 5.

*N. oraria hawaiiensis* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, p. 159.

*Degeeriella oraria* (Kellogg), Johnston and Harrison, 1912, Trans. N.Z. Inst., XLIV, p. 368.

*D. oraria* (Kellogg), Waterston, 1928, Insects of Samoa, Pt. VII, fasc. 3, p. 81.

Recorded hosts: *Pluvialis dominicus fulvus* (Gmelin); *Fulica alai* Peale.

True host: *Pluvialis dominicus fulvus* (Gmelin).

Localities: Hawaiian Is., Maui I.; Kermadec Is.; Samoa, Upolu, Apia.

88. *Degeeriella paludicola* (Kellogg and Kuwana).

*Nirmus paludicola* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 469-470, Pl. XXIX, f. 3.

Recorded host: *Butorides sundevalli* Reichenow.

Probable true host: ?

Locality: Galapagos Is., Albemarle I.

89. *Degeeriella ridgwayi* (Kellogg).

*Nirmus ridgwayi* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, pp. 317-318.

Recorded host: *Haematopus palliatus galapagensis* Ridgway.

Locality: Galapagos Is., Indefatigable I.

90. *Degeeriella separata* (Kellogg and Kuwana).

*Nirmus glriosus* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 467-468, Pl. XXIX, f. 1 (part).

*N. glriosus* var. *emarginatus* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, p. 159.

*N. separatus* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 472-473, Pl. XXIX, f. 6.

*N. separatus* Kellogg and Kuwana, 1906, Trans. Amer. ent. Soc., XXXII, p. 317.

*Degeeriella separata* (Kellogg and Kuwana), Harrison, 1916, Parasitology, IX, p. 123.

*D. separata* (Kellogg and Kuwana), Ferris, 1932, Bull. Bishop Mus., Honolulu, 98, pp. 69-70, f. 19.

*D. separata* (Kellogg and Kuwana), Ferris, 1935, Bull. Bishop Mus., Honolulu, 113, p. 12.

Recorded hosts: *Platyspiza crassirostris* (Gould); *Progne modesta* (Neboux); *Geospiza conirostris conirostris* Ridgway; *G. fortis* Gould; *Certhidea olivacea* Gould; *Anous stolidus galapagensis* Sharpe; *Sterna fuscata crissalis* (Lawrence); *Anous stolidus* (Linn.); *Nesopelia g. galapagoensis* (Gould).

Probable true hosts: *Anous* spp.

Localities: Galapagos Is., Albemarle I., Hood I., Clipperton I.; Hawaiian Is., Maui I.; Marquesas Is., Mohotani; Tahiti, Hitiaa.

91. *Degeeriella stenozona* (Kellogg and Chapman).

*Nirmus stenozona* Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, p. 158, Pl. XIII, f. 3.

Recorded hosts: ? *Uroloncha punctulata nisoria* (Temm. and Laug.) (*Munia nisoria*); *Vestiara coccinea* (Forster).

Locality: Hawaiian Is., Hilo.

92. *Degeeriella vulgata* (Kellogg).

- Nirmus vulgatus* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, Ser. 2, pp. 496-498, Pl. LXVII, f. 5.  
*N. vulgatus* Kellogg, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 474.  
*N. vulgatus* var. *galapagensis* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 474-475.

Recorded hosts: *Geospiza f. fuliginosa* Gould; *G. fortis* Gould; *G. c. conirostris* Ridgway; *G. scandens intermedia* Ridgway; *Nesomimus macdonaldi* Ridgway; *N. p. parvulus* (Gould); *N. melanotis* Gould; *N. parvulus barringtoni* Rothschild; *Cactospiza pallida producta* (Ridgway); *Camarhynchus affinis* Ridgway; *C. p. parvulus* (Gould); *Certhidea olivacea* Gould; *C. beckii* Rothschild; *Dendroica petechia aureola* (Gould); *Myiarchus magnirostris* Gray; *Pyrocephalus manus intercedens* Ridgway; *Sterna fuscata crissalis* (Lawrence).

Probable true hosts: All the above except *Sterna fuscata crissalis* (Lawrence).

Localities: Galapagos Is., Albemarle I., Narborough I., Chatham I., Hood I., Gardner I., Barrington I., Clipperton I., Wenman I.

93. *Rallicola advena* (Kellogg).

- Oncophorus advena* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, Ser. 2, pp. 133-135, Pl. XI, f. 1, 2.  
*O. advena* Kellogg, Kellogg and Chapman, 1902, J.N.Y. ent. Soc., X, p. 160.  
*Rallicola advena* (Kellogg), Harrison, 1916, Parasitology, IX, p. 126.

Recorded hosts: *Fulica alai* Peale; *Vestiara coccinea* (Forst.); *Heteractitis incanus* (Gmelin).

Probable true host: *Fulica alai* Peale.

Localities: Hawaiian Is., Maui I., Kahului, Hilo.

94. *Columbicola columbae* (Linn.).

- Pediculus columbae* Linn., 1758, Syst. Nat., p. 614.  
*Lipeurus baculus* Nitzsch, 1866, Z. ges. Naturw. XXVII, p. 118.  
*L. baculus* Nitzsch, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 478.  
*L. baculus* Nitzsch, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 320.  
*Columbicola columbae* (Linn.), Ewing, 1929, A Manual of External Parasites, pp. 116, 190.

Recorded hosts: *Anous stolidus galapagensis* Sharpe; *Geospiza f. fuliginosus* Gould; *Nesomimus melanotis* (Gould); *Cactospiza pallida producta* (Ridgway); *Nesopelia g. galapagoensis* (Gould).

Probable true host: *Nesopelia galapagoensis* (Gould).

Localities: Galapagos Is., Clipperton I., Albemarle I., Wenman I.

95. *Halipeurus diversus* (Kellogg).

- Lipeurus diversus* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, Ser. 2, pp. 123-124, Pl. VIII, f. 3, 4.  
*L. limitatus* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, Ser. 2, pp. 124-125, Pl. VIII, f. 5, 6.  
*L. limitatus* Kellogg, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 476.  
*L. diversus* Kellogg, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 476.  
*L. diversus major* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 477.  
*L. diversus* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 318.  
*L. limitatus* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 319.  
*Halipeurus diversus* (Kellogg), Thompson, 1936, Ann. Mag. nat. Hist., Ser. 10, XVIII, p. 41.

Recorded hosts: *Puffinus obscurus subalaris* Ridgway; *Anous stolidus galapagensis* Sharpe; *Butorides sundevalli* Reichenow; *Fulmarus* sp.; *Pterodroma phaeopygia* (Salvin).

Probable true hosts: *Puffinus obscurus subalaris* Ridgway; *Pterodroma phaeopygia* (Salvin).

Localities: Galapagos Is., Narborough I., Albemarle I., Culpepper I., Wenman I., Clarion I.

96. *Halipeurus kermadecensis* (Johnston and Harrison).

- Lipeurus kermadecensis* Johnston and Harrison, 1912, Trans. N.Z. Inst., XLIV, pp. 365-366, f. 1.  
*L. diversus excavatus* Johnston and Harrison, 1912, Trans. N.Z. Inst., XLIV, p. 366, f. 2.  
*Halipeurus kermadecensis* (Johnston and Harrison), Thompson, 1936, Ann. Mag. nat. Hist., Ser. 10, XVIII, p. 41.  
Recorded host: *Pterodroma neglecta* (Schlegl.).  
Localities: Kermadec Is.; Sunday I.

(Continued from p. 123)

97. *Halipeurus marquesanus* (Ferris).

*Esthiopterum marquesanum* Ferris, 1932, Bull. Bishop Mus., Honolulu, 98, pp. 62-63, f. 14.

*Halipeurus marquesanus* (Ferris), Thompson, 1936, Ann. Mag. nat. Hist., Ser. 10, XVIII, p. 41.

Recorded host: *Pterodroma rostrata* (Peale).

Locality: Marquesas, Hivaoa.

98. *Synnautes pelagicus* (Denny).

*Lipeurus pelagicus* Denny, 1842, Monographia Anoplurorum Britanniae, p. 173, Pl. 14, f. 2.

*L. languidus* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 475-476, Pl. XXIX, f. 8.

*L. exiguis* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 479, Pl. XXX, f. 2.

*L. languidus* Kellogg and Kuwana, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 319.

*L. exiguis* Kellogg and Kuwana, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 319.

*L. languidus* Kellogg and Kuwana, Johnston and Harrison, 1912, Trans. N.Z. Inst., XLIV, p. 367.

*L. exiguis* Kellogg and Kuwana, Johnston and Harrison, 1912, Trans. N.Z. Inst., XLIV, p. 367.

*Esthiopterum pelagicum* (Denny), Harrison, 1916, Parasitology, IX, p. 139.

*E. pelagicum* (Denny), Ewing, 1924, Zool. N.Y., V, p. 84.

*Synnautes pelagicus* (Denny), Thompson, 1936, Ann. Mag. nat. Hist., Ser. 10, XVIII, p. 43.

Recorded hosts: *Oceanites gracilis galapagoensis* Lowe; *Procellaria tethys* (Bonaparte); *Sula piscator websteri* Rothschild; *Actitis macularia* (Linn.); *Pyrocephalus nanus intercedens* Ridgway; *Nesomimus p. parvulus* (Gould); *Geospiza f. fuliginosa* Gould; *Cactospiza pallida producta* (Ridgway); *Puffinus obscurus subalaris* Ridgway; *Fulmarus* sp.; 'Sula fuliginosa'; *Pterodroma phaeopygia* (Salvin); *Fregata* sp.?; ? *Pelagodroma marina passerina* (Mathews) (*Pelagodroma nivea* Math.).

Probable true hosts: *Oceanites gracilis galapagoensis* Lowe; *Procellaria tethys* (Bonaparte); *Pelagodroma marina* (Mathews).

Localities: Galapagos Is., Albemarle I., Culpepper I., Wrenman I., Clarion I., Kermadec Is.

99. *Harrisoniella diomedaeae* (Fabricius).

*Pediculus diomedaeae* Fabricius, 1775, Syst. ent., p. 808.

*Lipeurus ferox* Giebel, 1867, Z. ges Naturw., XXIX, p. 195.  
*L. densus* Kellogg, 1896, Proc. Calif. Acad. Sci., VI, Ser. 2, pp. 114-115, Pl. VII, f. 1, 2.

*L. ferox* Giebel, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 318.

*L. ferox* Giebel, Kellogg and Paine, 1910, Ent. News, XXI, p. 125.

*L. densus* Kellogg, Kellogg and Paine, 1910, Ent. News, XXI, p. 125.

*Esthiopterum diomedaeae* (Fabricius), Harrison, 1916, Parasitology, IX, p. 133.

*Harrisoniella diomedaeae* (Fabricius), Bedford, 1929, Rept. Vet. Res., S. Afr., XV, p. 529.

Recorded hosts: ? *Diomedea irrorata* Salvin; *Thalassarche nigripes* (Audubon); *T. immutabilis* (Rothschild).

Localities: Galapagos Is., Clarion I.; Laysan I.; Erben Bank.

100. *Perineus concinnus* (Kellogg and Chapman).

*Lipeurus concinnus* Kellogg and Chapman, 1899, Occ. Pap. Calif. Acad. Sci., VI, pp. 97-99, Pl. VII, f. 2.

*L. concinnus* Kellogg and Chapman, Kellogg and Paine, 1910, Ent. News, XXI, p. 125.

*Perineus concinnus* (Kellogg and Chapman), Thompson, 1936, Ann. Mag. nat. Hist., Ser. 10, XVIII, p. 42.

Recorded host: *Thalassarche immutabilis* (Rothschild).

Locality: Laysan I.

101. *Perineus confidens* (Kellogg).

*Lipeurus confidens* Kellogg, 1899, Occ. Pap. Calif. Acad. Sci., VI, pp. 26-28, Pl. III, f. 1.

*L. miriceps* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 480-481, Pl. XXX, f. 4.

*L. confidens* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 318.

*L. confidens* Kellogg, Kellogg and Paine, 1910, Ent. News, XXI, p. 125.

*Perineus confidens* (Kellogg), Thompson, 1936, Ann. Mag. nat. Hist., Ser. 10, XVIII, p. 43.

Recorded hosts: *Geospiza f. fuliginosa* Gould; ? *Diomedea irrorata* Salvin; *Melanosterna lunata* (Peale).

True hosts: ? *Diomedea irrorata* Salvin; *Thalassarche nigripes* (Audubon).

Localities: Galapagos Is., Albemarle I., Clarion I.; Erben Bank; Laysan I.

102. *Naubates fuliginosus* (Taschenberg).

*Lipeurus fuliginosus* Taschenberg, 1883, Nova Acta Leop. Carol., XLIV, p. 156, Pl. 4, f. 3.

*L. fuliginosus* Taschenberg, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 319.

*Naubates fuliginosus* (Taschenberg), Bedford, 1930, Rept. Vet. Res., S. Afr., XVI, p. 168, f. 9, 15, 16A.

Recorded host: *Sula piscator websteri* Rothschild.

Probable true host: A species of petrel.

Locality: Galapagos Is., Clarion I.

103. *Pectinopygus (Pectinopygus) minor* (Ewing).

*Esthiopterum potens minor* Ewing, 1924, Zoologica, N.Y., V, p. 84.

*Pectinopygus (Pectinopygus) potens minor* (Ewing), Thompson, 1936, Ann. Mag. nat. Hist., Ser. 10, XX, p. 540.

Recorded host: *Sula nebouxii* Milne-Edwards.

Locality: Galapagos Is.

104. *Pectinopygus (Pectinopygus) sulae* Rudow.

*Lipeurus sulae* Rudow, 1869, Beitrag zur Kenntniss der Mallophaga oder Pelzfresser, Diss., Halle, p. 43.

*L. gracilicornis major* Kellogg, 1899, Occ. Pap. Calif. Acad. Sci., VI, p. 30 (part).

*L. gracilicornis major* Kellogg, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 477 (part).

*L. potens* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 477-478, Pl. XXX, f. 1.

*L. helleri* Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, pp. 479-480, Pl. XXX, f. 3 (part).

*L. potens* Kellogg and Kuwana, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 319 (part).

*L. helleri* Kellogg and Kuwana, Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 319 (part).

*L. gracilicornis major* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 319 (part).

*L. potens* Kellogg and Kuwana, Kellogg and Paine, 1910, Ent. News, XXI, p. 125.

*Pectinopygus sulae* (Rudow), Waterston, 1929, Insects of Samoa, Pt. VII, fasc. 3, p. 82.

*P. sulae* (Rudow), Ferris, 1932, Bull. Bishop Mus., Honolulu, 98, pp. 64-67, f. 16, 17.

*P. (Pectinopygus) sulae* (Rudow), Thompson, 1937, Ann. Mag. nat. Hist., Ser. 10, XX, p. 540.

Recorded hosts: *Fregata* sp.; *Sula piscator websteri* Rothschild; *S. dactylatra granti* Rothschild; *Fregata minor* (Lesson).

Probable true hosts: *Sula* spp.

Localities: Galapagos Is.; Laysan I.; Samoa; Marquesas.

NOTE.—Owing to the terrible amount of confusion regarding this species, I have not listed all the recorded hosts since it is impossible to tell from the records alone which specimens represent the present species. Ewing (1924, Zoologica, N.Y., V, p. 82) recorded *E. helleri* (Kellogg and Kuwana) off *Sula piscator* from the Galapagos Is.

105. *Pectinopygus (Epifregata) gracilicornis* (Piaget).

*Lipeurus gracilicornis* Piaget, 1880, Les Pediculines, Leiden, p. 309, Pl. XXV, f. 6.

*L. gracilicornis major* Kellogg, 1899, Occ. Pap. Calif. Acad. Sci., VI, p. 30, Pl. 3, f. 3.

*L. gracilicornis major* Kellogg, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 477.

*L. gracilicornis major* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 319.

*L. gracilicornis major* Kellogg, Kellogg and Paine, 1910, Ent. News, XXI, p. 125.

*Esthiopterum gracilicornis* Piaget, Ferris, 1932, Bull. Bishop Mus., Honolulu, 98, pp. 61-62, f. 13.

*Pectinopygus (Epifregata) gracilicornis* (Piaget), Thompson, 1937, Ann. Mag. nat. Hist., Ser. 10, XX, p. 542.

Recorded hosts: *Fregata* sp.; *Sterna fuscata crissalis* (Lawrence); *Sula dactylatra granti* Rothschild; *Fregata minor strumosa* Harttert; *Melanosterna lunata* (Peale); *Fregata minor* (Lesson).

Probable true hosts: *Fregata* spp.

Localities: Galapagos Is., Clarion I., Cape St. Lucas, Clipperton I.; Necker I.; Laysan I.; Marquesas, Hatutu (Hatutaa).

[September,

106. *Pectinopygus (Philichthyophaga) nannopteri* (Ewing).  
*Esthiopterum nannopteri* Ewing, 1924, Zoologica, N.Y., V, pp. 82-84, f. 12.  
*Pectinopygus (Philichthyophaga) nannopteri* (Ewing), Thompson, 1937, Ann. Mag. nat. Hist., Ser. 10, XX, p. 542.  
Recorded host: *Nannopterum harrisi* (Rothschild).  
Locality: Galapagos Is.
107. *Philoceanus becki* Kellogg.  
*Philoceanus becki* Kellogg, 1903, Biol. Bull., V, pp. 88-89, f. 1, 2.  
*P. becki* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 320.  
Recorded host: *Procellaria tethys* (Bonaparte).  
Locality: Galapagos Is.; Wenman I.
108. *Giebelia fuscoelypeata* (Johnston and Harrison).  
*Philopterus fuscoelypeatus* Johnston and Harrison, 1912, Trans. N.Z. Inst., XLIV, pp. 368-369, f. 4.  
*Giebelia fuscoelypeata* (Johnston and Harrison), Harrison, 1916, Parasitology, IX, p. 144.  
Recorded host: *Pterodroma neglecta* (Schlegel).  
Locality: Kermadec Is.
109. *Giebelia mirabilis* Kellogg.  
*Giebelia mirabilis* Kellogg, 1896, Proc. Calif. Acad. Sci., Ser. 2, VI, pp. 138-140, Pl. XI, f. 7, 8.  
*G. mirabilis* Kellogg, Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 482.  
*G. mirabilis* Kellogg, 1906, Trans. Amer. ent. Soc., XXXII, p. 320.  
Recorded hosts: *Puffinus obscurus subalaris* Ridgway; *Fulmarus* sp.; *Oceanites gracilis galapagoensis* Lowe; *Sula piscator websteri* Rothschild; *Pterodroma phaeopygia* (Salvin).  
Probable true hosts: *Puffinus obscurus subalaris* Ridgway; *Pterodroma phaeopygia* (Salvin); *Oceanites gracilis galapagoensis* Lowe.  
Locality: Galapagos Is.
110. *Docophoroides brevis* (Dufour).  
*Philopterus brevis* Dufour, 1834, Ann. Soc. ent. Fr., IV, p. 676, Pl. 21, f. 3.  
*Eurytomopus brevis* (Dufour), Kellogg and Kuwana, 1902, Proc. Wash. Acad. Sci., IV, p. 482.

1939.]

214

- E. brevis* (Dufour), 1906, Trans. Amer. ent. Soc., XXXII, p. 320.  
*E. taurus* Nitzsch, Kellogg and Paine, 1910, Ent. News, XXI, p. 125.

Recorded hosts: *Arenaria i. interpres* (Linn.); *Diomedea irrorata* Salvin; *Thalassarche nigripes* (Audubon); *Thalassarche immutabilis* Rothschild.

Probable true hosts: *Diomedea* spp. and *Thalassarche* spp.

Localities: Galapagos Is., Narborough I., Clarion I.; Laysan I.; Erben Bank.

#### HOST—PARASITE LISTS.

##### I. BIRDS RECORDED FROM ISLANDS OTHER THAN THE GALAPAGOS IS.

Hosts.	Parasites.
<i>Spilogelia chinensis</i> (Scop.).	<i>G. chinensis</i> Kellogg and Chapman.
<i>Fulica alai</i> Peale.	<i>R. advena</i> (Kellogg).
<i>Pelagodroma marina passerina</i> (Mathews).	<i>A. vagelli</i> (Fabricius).
<i>Pterodroma neglecta</i> (Schlegel).	<i>S. pelagicus</i> (Denny).
<i>Pterodroma rostrata</i> (Peale).	<i>H. kermadecensis</i> (Johnston and Harrison).
<i>Cookilaria hypoleuca</i> (Salvin).	<i>G. fuscoelypeatus</i> (Johnston and Harrison).
<i>Thalassarche nigripes</i> (Audubon).	<i>H. marquesanus</i> (Ferris).
<i>T. immutabilis</i> Rothschild.	<i>A. vagelli</i> (Fabricius).
<i>Gygis terna sumatrana</i> (Raffles).	<i>H. diomedae</i> (Fabricius).
<i>Onychoprion fuscata</i> (Linn.).	<i>P. confidens</i> (Kellogg).
<i>Melanosterna lunata</i> (Peale).	<i>D. brevis</i> (Dufour).
<i>Anous stolidus</i> (Linn.).	<i>H. diomedae</i> (Fabricius).
<i>Pluvialis dominicus fulvus</i> (Gmelin).	<i>P. concinnus</i> (Kellogg and Chapman).
<i>Phaeopus phaeopus variegatus</i> (Scop.).	<i>D. brevis</i> (Dufour).
	<i>A. milleri</i> (Kellogg and Kuwana).
	<i>M. sternophilum</i> Ferris.
	<i>S. snyderi</i> (Kellogg and Paine).
	<i>D. birostris</i> (Giebel).
	<i>S. snyderi</i> (Kellogg and Paine).
	<i>D. birostris</i> (Giebel).
	<i>C. discrepans</i> Kellogg and Chapman.
	<i>A. milleri</i> (Kellogg and Kuwana).
	<i>A. epiphanes</i> (Kellogg and Chapman).
	<i>D. separata</i> (Kellogg and Kuwana).
	<i>C. brachysomum</i> Kellogg and Chapman.
	<i>A. timidus</i> (Kellogg).
	<i>P. conicus</i> (Denny).
	<i>D. oraria</i> (Kellogg).
	<i>P. armatus</i> Johnston and Harrison.

[September,

*Heteractitis incanus* (Gmelin).*Sula* sp.*Fregata minor* (Lesson).*Fregata minor strumosa* Hartert.*Asio flammeus* (Pontopp.).*Vini australis* (Gmelin).*Collocalia ocista* Oberholser.*Vestiaria coccinea* (Forster).*Himatione sanguinea* (Gmelin).*Chlorodrepanis virens* (Gmelin).*Uroloncha punctulata nisoria*  
(Temm. and Lang.).*Aplonis opaca* (Kittl.).*A. atrifusca* (Peale).*Introduced host.**Sturnus vulgaris* Linn.*P. sturni* (Schrank).*D. nebulosa* (Burmeister).*Unplaced hosts.**Carpodacus mexicanus obscurus.**C. discrepans* Kellogg and Chapman.*M. conspicua* Kellogg and Chapman.*E. denticulatum* Harrison.*M. invadens* Kellogg and Chapman.*L. minhaensis* Kellogg and Chapman.*D. minhaensis* Kellogg and Chapman.**II. BIRDS OF THE GALAPAGOS IS.***Hosts.**Diomedea irrorata* Salvin.*Parasites.**H. diomedae* (Fabricius).*P. confidens* (Kellogg).*D. brevis* (Dufour).*H. diversus* (Kellogg).*G. mirabilis* Kellogg.*M. naboroughi* Kellogg and Kuwana.*M. numerosum* Kellogg.*P. minor* (Kellogg and Kuwana).*Pterodroma phaeopygia* (Salvin).*Puffinus obscurus subalaris* Ridgway.

1939.]

*H. diversus* (Kellogg).*G. mirabilis* Kellogg.*S. pelagicus* (Denny).*P. becki* Kellogg.*P. platycephalus* (Kellogg and Kuwana).*S. pelagicus* (Denny).*G. mirabilis* Kellogg.*M. becki* Kellogg.*S. phaethonus* (Howard).*C. unciferum* Kellogg.*M. navigans* Kellogg.*P. (P.) minor* (Ewing).*P. (P.) sulae* (Rudow).*P. (P.) nannopteri* (Ewing).*M. aurifasciatum* Kellogg.*C. angulaticeps* Piaget.*P. (E.) gracilicornis* (Piaget).*? D. paludicola* (Kellogg and Kuwana).*C. heterosoma* Piaget.*T. lituratum* Nitzsch.*T. querquedulae* (Linn.).*A. dentatus* (Scopoli).*C. flavescentis* Nitzsch.*P. taurocephalus* (Kellogg).*A. grandiceps* (Piaget).*D. ridgwayi* (Kellogg).*S. gonothorax* (Giebel).*? S. melanocephala* (Nitzsch).*M. singularis* Kellogg and Kuwana.*S. albemarlensis* (Kellogg and Kuwana).*S. melanocephala* (Nitzsch).*S. peristictus* (Kellogg and Kuwana).*D. birostris* (Giebel).*D. lepida* (Kellogg and Kuwana).*D. obtusa* (Kellogg and Kuwana).*M. fuscofasciatum* Piaget.*M. singularis* Kellogg and Kuwana.*A. milleri* (Kellogg and Kuwana).*S. melanocephala* (Nitzsch).*D. separata* (Kellogg and Kuwana).*G. galapagensis* Kellogg and Kuwana.*C. columbae* (Linn.).*M. snodgrassi* Kellogg and Kuwana.*P. cursor* (Nitzsch).*R. angulatus* (Kellogg).*D. galapagensis* (Kellogg and Kuwana).*D. vulgata* (Kellogg).*Anous stolidus galapagensis* Sharpe.*Nesopelia g. galapagoensis* (Gould).*Coccyzus melacoryphus* Vieillot.*Asio galapagoensis* (Gould).*Myiarchus magnirostris* (Gray).

*Pyrocephalus nanus* Gould.

*D. galapagensis* (Kellogg and Kuwana).  
*D. vulgata* (Kellogg).  
*P. insulicola* (Kellogg and Kuwana).

*Progne modesta* (Neboux).

*M. rustica* (Nitzsch).  
*P. breviformis* (Kellogg and Kuwana).  
*P. domesticus* (Kellogg).

*Nesomimus macdonaldi* Ridgway.

*M. galapagensis* Kellogg and Kuwana.  
*M. icterum* Kellogg.  
*D. galapagensis* (Kellogg and Kuwana).

*N. melanotis* (Gould).

*M. icterum* Kellogg.  
*D. galapagensis* (Kellogg and Kuwana).  
*D. vulgata* (Kellogg).

*N. parvulus* (Gould).

*M. icterum* Kellogg.  
*P. galapagensis* (Kellogg and Kuwana).  
*D. galapagensis* (Kellogg and Kuwana).

*Dendroica petechia aureola* (Gould).

*D. vulgata* (Kellogg).  
*R. angulatus* (Kellogg).  
*D. interposita* (Kellogg).  
*D. vulgata* (Kellogg).

*Geospiza* spp.

*M. albemarlei* Kellogg and Kuwana.  
*M. galapagensis* Kellogg and Kuwana.

*M. icterum* Kellogg.  
*P. galapagensis* (Kellogg and Kuwana).  
*P. insulicola* (Kellogg and Kuwana).

*P. subflavescens* (Geoffroy).  
*D. galapagensis* (Kellogg and Kuwana).  
*D. vulgata* (Kellogg).

*Platyspiza crassirostris* (Gould).

*M. icterum* Kellogg.  
*D. galapagensis* (Kellogg and Kuwana).

*Camarhynchus* spp.

*M. icterum* Kellogg.  
*P. galapagensis* (Kellogg and Kuwana).

*D. vulgata* (Kellogg).  
*M. albemarlei* Kellogg and Kuwana.  
*M. icterum* Kellogg.

*Cactospiza* spp.

*P. galapagensis* (Kellogg and Kuwana).  
*D. galapagensis* (Kellogg and Kuwana).

*D. vulgata* (Kellogg).  
*M. icterum* Kellogg.  
*P. insulicola* (Kellogg and Kuwana).

*Certhidea* spp.

1939.]

[October,

*D. galapagensis* (Kellogg and Kuwana).  
*D. vulgata* (Kellogg).

*Unplaced hosts.*

*Speotyto* sp.  
*Corvus* sp.

*P. syrnii* (Packard).  
*C. subaequale* Nitzsch.  
*P. corvi* (Osborn).

Pacific Entomological Survey.

July, 1938.

