

The Fleas (Siphonaptera) of the Faroe Islands

Yvirlit yvir loppur skrásettar í Føroyum

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Úrtak

Henda grein viðger loppur í Føroyum. Til fyri stuttum vóru bert tvey sløg kend úr Føroyum, men við at leita nágreiniliga á fuglum og súgdjórum eftir loppum og í fuglareiðrum eftir ormverum og loppueggjum hefur tað borið til at økja um talið til níggju – fyra teirra eru súgdjoraloppur og fimm eru fuglalloppur.

Abstract

This paper deals with the flea fauna of the Faroe Islands. Until recently only two species were known from the islands, but intensive collecting from birds and mammals and hatching from nest material has increased the number of species to nine – four of which are mammal fleas and five are bird fleas.

Fleas are possibly the least liked of all animals – everybody hates them, nobody loves them or even likes them with the possible exception of the authors and a handful of others (approximately 150 persons) on a world basis.

Until recently only two species were known from the Faroe Islands e.g. the human flea (*Pulex irritans*) and a common

bird flea (*Ceratophyllus gallinae*) (Henrikson, 1929) locally known as “the starling flea”. Of these two the former was once very common (Rasmussen, 1928), but is now probably extinct, a fact that nobody regrets, the latter is still doing very well indeed.

This was the situation until 1996, when we agreed to investigate the flea fauna of the islands. Jens-Kjeld Jensen was responsible for collecting and mounting the fleas in canada balsam, while Lars Trolle identified the species. The investigation ran over three years (1996, 1997 and 1998). We didn't do this completely alone – a lot of people helped us and we would like to thank: Nils Jákup Absalonsen, Esmar Sørensen, Kristina Petersen, Espen i Eyðanstovu, Andreas F. Poulsen, Ruth Simonsen, Ólavur Sørensen, Aksal Poulsen, T. Sørensen, Alf Sørensen, Kinna úr Dímun, Páll Thomsen, R.L.C. Pilgrim, Eyðbjørt Simonson, Bergur Hanusson, Sólbjörn Hansen, H. Mikkelsen, Svend Krosstein, Dánjal Jesp-

ersen, Dorete Bloch and Gert Brovad for various services rendered.

Altogether we found more than 5000 fleas, of which 475 were slide-mounted and these are kept at the Museum of Natural History in Tórshavn.

The life of a flea

Fleas are small (1-8 mm long) wingless insects. As adults their bodies are strongly compressed laterally and so contrary to other insects are always pictured from the side. They are heavily sclerotised, hairy and shiny and normally light brown to almost black. Fleas are parasitic in the adult stage only, sucking blood from birds and mammals. In low temperatures adult fleas can exist for long periods without food. The females produce up to 100 eggs during their lifetime – not in one go though, but a few after each meal.

The larvae are legless and eyeless with few, but strong bristles and biting mouthparts; they are not parasitic, but feed on organic matter, which they find in the nest or dwelling place of the host. They can also be called indirect parasites, as the only partly digested blood from the adult fleas' excrements is a vital ingredient in the food of the larvae (Brinck-Lindroth, 1983). The larvae are lively and quickly disperse to an environment, which is suitable – generally they prefer a humidity between 75% and 90%. They moult twice and the larval stage normally lasts approx. one to two weeks.

The free pupa is contained in a cocoon. The pupa stage normally lasts from one to two weeks, but if the cocoon is kept completely still, the flea will often stay in-

side the cocoon for up to one year. The slightest movement will cause it to leave the cocoon immediately, which is why sometimes empty houses are found to have whole armies of hungry fleas.

Method

Thus (Fowler, J.A. and Cohen, S., 1983) fleas were either collected from the hosts as adults for example when birds were ringed, they were also checked for fleas and in the same manner mammal fleas were caught from mice and cats. However most fleas were hatched from larvae – i.e. nesting material was deposited in polythene bags and regularly checked for fleas.

In 1997 for instance nesting material was collected from the following bird nests:

- Puffin (*Fratercula arctica*) – 25 nests from Seyðtorvu, Viðoy
- Puffin (*Fratercula arctica*) – 15 nests from Hvannrók, Trøllanes
- Eider (*Somateria molissima*) – 15 nests from Sumbiarhólmur
- Eider (*Somateria molissima*) – 5 nests from Nólsoy
- Greylag Goose (*Anser anser*) – 3 nests from Leitisvatn
- Kittiwake (*Rissa tridactyla*) – 2 nests from Stóra Dímun, from one of which hatched 1234 fleas (!).
- Lesser Black-backed gull (*Larus fuscus*) – 5 nests from Nólsoy
- Lesser Black-backed gull (*Larus fuscus*) – 1 nest from Toftir
- Feral Pigeon (*Columba livia*) – 2 nests from a pigeonloft in Tórshavn
- Starling (*Sturnus vulgaris*) – 2 nests from Sumba
- Starling (*Sturnus vulgaris*) – 3 nests from Nólsoy
- Starling (*Sturnus vulgaris*) – 1 nest from Sandavágur
- Starling (*Sturnus vulgaris*) – 1 nest from Stóra Dímun
- Fieldfare (*Turdus pilaris*) – 1 nest from Klaksvík
- Blackbird (*Turdus merula*) – 1 nest from Klaksvík
- House Sparrow (*Passer domesticus*) – 12 nests from Nólsoy
- House Sparrow (*Passer domesticus*) – 3 nests from Viðareiði
- Wren (*Troglodytes troglodytes*) – 1 nest from Mykines

Adult fleas were collected from approx. 25 House Mice (*Mus domesticus*), 5 Common Rats (*Rattus norvegicus*) and numerous passerines.

And in 1998:

- Puffin (*Fratercula arctica*) – 11 nests from Skúvoy – no fleas
- Puffin (*Fratercula arctica*) – 9 nests from Mykines – no fleas
- Puffin (*Fratercula arctica*) – 11 nests from Tindhólmur – no fleas
- Fulmar (*Fulmarus glacialis*) – 2 nests from Mykines – no fleas
- Fulmar (*Fulmarus glacialis*) – 5 nests from Nólsoy – no fleas
- Manx shearwater (*Puffinus puffinus*) – 6 nests from Skúvoy – 3 with fleas
- Gannet (*Sula bassana*) – 7 nests from Mykines – no fleas
- Kittiwake (*Rissa tridactyla*) – 4 nests from Mykines – 2 with fleas
- Kittiwake (*Rissa tridactyla*) – 2 nests from Stóra Dímun – 1 with fleas
- Feral Pigeon (*Columba livia*) – nests from a pigeon-loft in Húsavík – 2 flea species
- Starling (*Sturnus vulgaris*) – 1 nest from Skúvoy – no fleas
- Blackbird (*Turdus merula*) – 1 nest from Skúvoy – no fleas
- Wren (*Troglodytes troglodytes*) – 1 nest from Skúvoy – no fleas
- White Wagtail (*Motacilla alba*) – 1 nest with larvae, but none hatched. However the larvae were identified as *Dasyphyllus g. gallinulae* by Prof. R.L.C. Pilgrim of Univ. of Canterbury, New Zealand
- House Sparrow (*Passer domesticus*) – 2 nests from Tórshavn – both with fleas

After being killed the fleas are kept in 70% alcohol until they are mounted on microscopic slides – i.e. they are put in a 20% aqueous solution of potassic hydroxide (KOH) at room temperature for a couple of days until they are somewhat transparent.

After which the KOH is washed out with water for 30 minutes. Then the water is replaced by a 10% solution of acetic acid for 30-40 minutes. The acid neutralises the remaining alkali and stops the maceration. The specimens are then dehydrated – first in 40% alcohol for 30-40 minutes followed by a similar period in 70% alcohol and finally in 96% alcohol. When dehydration is completed the alcohol is replaced by pure clove oil for at least 24 hours. They are mounted in Canada balsam dissolved in xylol and finally labelled with Indian ink and left to dry.

The species

The material consists of 9 species of which 7 are new to the Faroe Islands.

While adult fleas are not always very particular regarding the type of blood they get i.e. it is not uncommon to be bitten by a bird flea, the larvae only thrive in their specific environment. Thus of the 9 species 4 can be regarded as mammal fleas and 5 are bird fleas.

1. *Pulex irritans* L. – (fig.1)

The genus *Pulex* has 6 species, five of which occur in the Neotropical Region and the southern part of the Nearctic Region. The last species is associated with man and human habitations. Owing to improvement of the standard of hygiene, the human flea can almost be regarded as an endangered species in Northern Europe with the exception of Ireland for some peculiar reason (Sleeman *et al.*, 1996). It is sometimes found in large numbers in old fashioned pigsties, while in nature it occurs fairly fre-

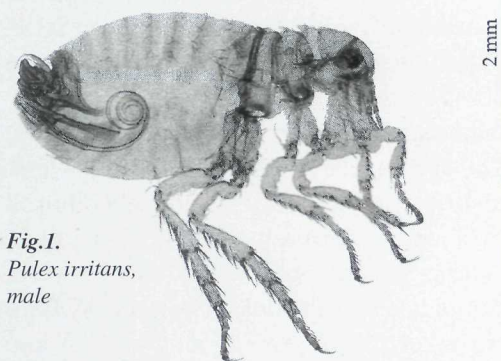


Fig. 1.
Pulex irritans,
male

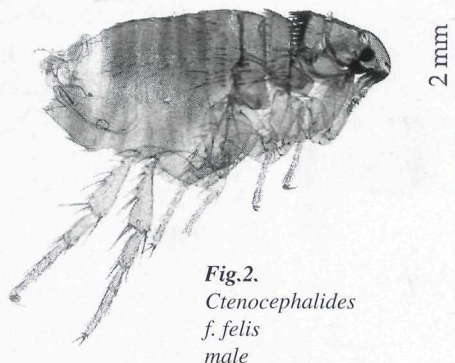


Fig. 2.
Ctenocephalides
f. felis
male

quently on carnivores such as Badgers (*Meles meles*) and Foxes (*Vulpes vulpes*). 50 or 60 years ago it was quite common for sheepdogs in Nólsoy to be infested with fleas (Páll Thomsen, pers.comm.) and it might have been *P. irritans*, but could also be *C. felis* or even *C. canis*.

Man may well be a secondary host, since no primates are known to have fleas of their own. Having followed man all over the world, the human flea is now cosmopolitan. The human flea is probably extinct in the Faroe Islands.

Material examined:

"Eide" (Eiði) – 5 females 1926-27 (? Kryger leg.)

"Thorshavn" (Tórshavn) - 1 male 28.June 1926 –
Kryger leg. – on man

2. *Ctenocephalides felis felis* (Bouché) –
(figs. 2 and 3)

The genus *Ctenocephalides* is found worldwide, but concentrated in the Ethiopian Region. The genus parasites especially carnivores, but a few species are found on other hosts e.g. goat.

Ctenocephalides felis felis is probably better known as "the cat flea" and the do-

mestic cat is the principal host in Europe, but it is also very common on dogs – far more common than the "dog flea" (*Ctenocephalides canis*), which so far has not been found in the Faroe Islands. A very common cosmopolitan flea, which is found frequently on a large variety of animals in the tropics. It bites man readily and is often the species responsible for infestations of fleas in houses.

Material examined:

Vestmanna – 2 males, 2 females – 15. October 1991 –
Dorete Bloch leg.

Klaksvík – 2 females – October 1998 – Bergur
Hanusson leg – on a cat

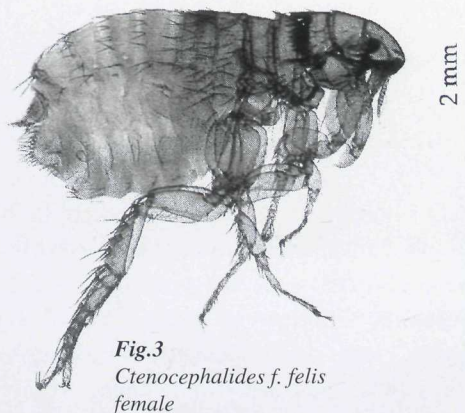


Fig. 3
Ctenocephalides f. felis
female

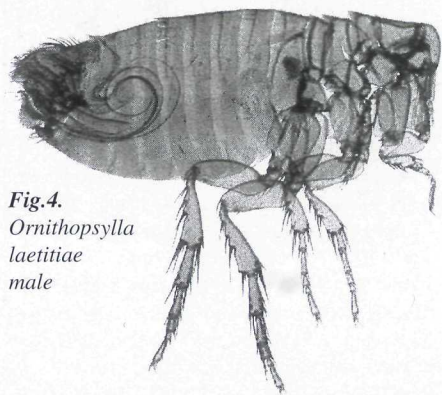


Fig.4.
Ornithopsylla
laetitiae
male

3. *Ornithopsylla laetitiae* Rothchild – (figs. 4 and 5)

Ornithopsylla laetitiae is confined to seabirds living in burrows in sandy soil on islands. The true host is probably the Manx Shearwater, but the flea has also been found in association with the Puffin. Both birds often make use of the same burrow and since they appear to have the same nesting habits it might be that both species are true hosts to this flea, however none of the Puffins nests collected in the Faroe Islands yielded any fleas. It has also been found in nests of the Storm Petrel (*Hydrobates pelagicus*).

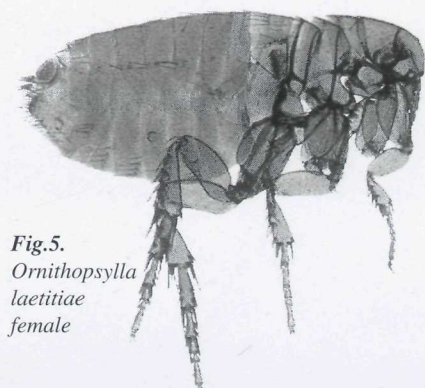


Fig.5.
Ornithopsylla
laetitiae
female

Ornithopsylla laetitiae was hitherto only recorded from the British Isles: Scilly Isles, Skokholm, Skomer, Bardsey, Great Skellig Rock and Ireland's Eye and the records from the Faroe Islands were possibly the most interesting result of the flea investigation as seen from a zoogeographical point of view.

Material examined:

Skúvoy – 1 female – 01 August 1997 – H. Mikkelsen leg. – on man cleaning a young Manx Shearwater (*Puffinus puffinus*).

Skúvoy 7 males, 10 females – 06 August 1998 – Jens-Kjeld Jensen leg. – from nests of Manx Shearwater (*Puffinus puffinus*).

4. *Leptopsylla segnis* (Schönherr) – (fig. 6)

The genus *Leptopsylla* are parasites of rodents, especially of the subfamily *Murinae*.

This very common and cosmopolitan flea is mainly found on the common House Mouse, in some parts of the world it also lives on rats.

Material examined:

Nólsoy – 1 female – 16 May 1996 – Jens-Kjeld Jensen leg. – on a House Mouse (*Mus domesticus*).

Nólsoy – 2 females – 26 September 1997 – Jens-Kjeld Jensen leg. – on a House Mouse (*Mus domesticus*).

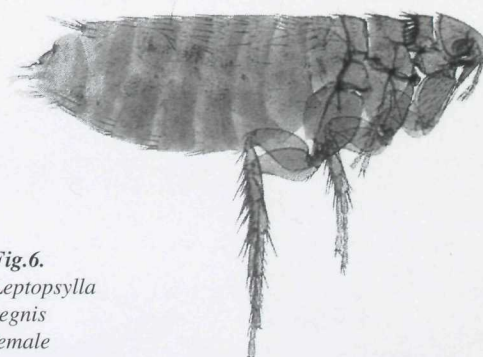


Fig.6.
Leptopsylla
segnis
female

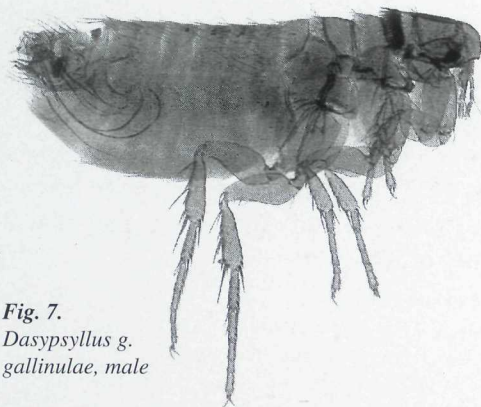


Fig. 7.
Dasyptillus g.
gallinulae, male

5. *Dasyptillus gallinulae gallinulae* (Dale)
– (figs.7 and 8)

The genus *Dasyptillus* are bird fleas. *D. gallinulae gallinulae* is a very common species in most of Europe, it being a parasite on a large number of smaller birds especially of the Passeriformes. In the Faroe Islands a single specimen was found on a House Mouse (*Mus domesticus*), which reflects the fact that many fleas are quite broadminded when it comes to sucking blood.

Material examined:

- Nólsoy – 1 male 29 May 1996 – Jens-Kjeld Jensen leg.
– on a Redstart (*Phoenicurus phoenicurus*).
Nólsoy – 1 male 29 May 1996 – Jens-Kjeld Jensen leg.
– on a Whitethroat (*Sylvia communis*)
Nólsoy – 2 males, 1 female – 29 May 1996 – Jens-Kjeld Jensen leg. on a Garden Warbler (*Sylvia borin*)
Nólsoy – 2 males, 2 females – 11 June 1996 – Jens-Kjeld Jensen leg. – on a Garden Warbler (*Sylvia borin*)
Nólsoy – 2 males – 22 April 1997 – Jens-Kjeld Jensen leg. – on a Redwing (*Turdus iliacus*)
Nólsoy – 1 male – 2 May 1997 – Jens-Kjeld Jensen leg. – on a Grasshopper Warbler (*Locustella naevia*)
Nólsoy – 1 male – 9 May 1997 – Jens-Kjeld Jensen leg. – on a Willow Warbler (*Phylloscopus trochilus*)

- Nólsoy – 1 male – 11 May 1997 – Jens-Kjeld Jensen leg. – on a Whitethroat (*Sylvia communis*)
Nólsoy – 1 male, 1 female – 12 May 1997 – Jens-Kjeld Jensen leg. – on a Blackcap (*Sylvia atricapilla*)
Nólsoy – 1 female – 14 May 1997 – Jens-Kjeld Jensen leg. – on a Blackcap (*Sylvia atricapilla*)
Nólsoy – 1 male – 31 May 1997 – Jens-Kjeld Jensen leg. – on a Blackbird (*Turdus merula*)
Nólsoy – 1 female – 30 July 1997 – Jens-Kjeld Jensen leg. – on a Wren (*Troglodytes troglodytes*)
Nólsoy – 1 male – 1 August 1997 – Jens-Kjeld Jensen leg. – on a Rock Pipit (*Anthus petrosus*)
Nólsoy – 1 female – 1 August 1997 – Jens-Kjeld Jensen leg. – on a House Mouse (*Mus domesticus*)
Nólsoy – 2 females – 7 August 1997 – Jens-Kjeld Jensen leg. – from nest of a Blackbird (*Turdus merula*)
Viðareði – 2 males, 6 females – 10 August 1997 – Nils Jákup Absalonsen leg. – from nest of a House Sparrow (*Passer domesticus*)
Nólsoy – 1 female – 12 August 1997 – Jens-Kjeld Jensen leg. – on a Wren (*Troglodytes troglodytes* ssp. *borealis*)
Nólsoy – 5 males – 30 August 1997 – Jens-Kjeld Jensen leg. – on a Brambling (*Fringilla montifringilla*)
Nólsoy – 1 male – 6 October 1997 – Jens-Kjeld Jensen leg. – on a Chiffchaff (*Phylloscopus collybita*)
Mykines – 2 males, 10 females – 25 October 1997 – Svend Krosstein leg. – from nest of a Wren (*Troglodytes troglodytes*).
Nólsoy – 1 female – 23 April 1998 – Jens-Kjeld Jensen leg. – on a Goldcrest (*Regulus regulus*)
Nólsoy – 1 female – 25 April 1998 – Jens-Kjeld Jensen leg. – on a Dunnock (*Prunella modularis*)
Nólsoy – 2 males – 26 April 1998 – Jens-Kjeld Jensen leg. – on a Dunnock (*Prunella modularis*)

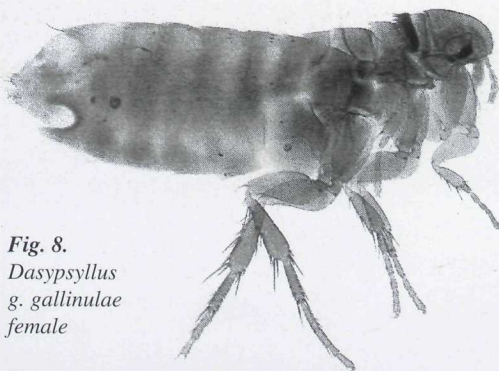


Fig. 8.
Dasyptillus
g. gallinulae
female

- Nólsoy – 1 female – 27 April 1998 – Jens-Kjeld Jensen leg. – on a Robin (*Erithacus rubecula*)
 Nólsoy – 1 female – 15 May 1998 – Jens-Kjeld Jensen leg. – on a Chiffchaff (*Phylloscopus collybita*)
 Húsavík – 1 female – 18 June 1998 – Jens-Kjeld Jensen leg. – in a pigeon-loft
 Eiði – 1 male – 20 June 1998 – Jens-Kjeld Jensen leg. – on an Oystercatcher (*Haematopus ostralegus*)
 Nólsoy – 1 male – 15 October 1998 – Jens-Kjeld Jensen leg. – on a Goldcrest (*Regulus regulus*)

6. *Nosopsyllus fasciatus* (Bosc). – (fig. 9)

The rat flea is rather well-known because of its possible rôle as a vector in transmitting the bubonic plaque during the Middle Ages.

This is yet another cosmopolitan flea, which principally occurs on rats, but it has also been found on secondary hosts like the Wood-mouse (*Apodemus sylvaticus*), the House Mouse and voles (*Microtinae*). The single Faroese specimen was also found on a secondary host. Henriksen (1939) mentions briefly, that the species is known from The Faroes, but not when or where.

Material examined:

- Fuglafjørður – 1 female – 14 August 1998 – Kristina Petersen leg. – on a cat .

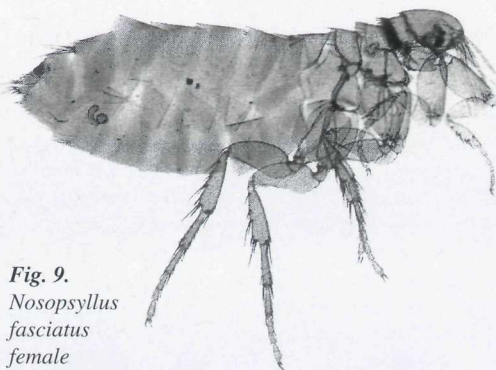


Fig. 9.
Nosopsyllus
fasciatus
female

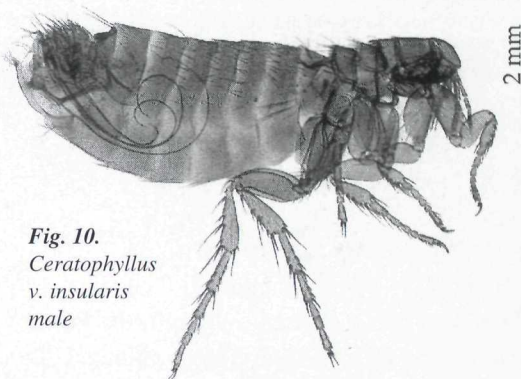


Fig. 10.
Ceratophyllus
v. insularis
male

7. *Ceratophyllus vagabundus insularis* Rothchild – (figs. 10 and 11)

The genus *Ceratophyllus* is a big one with app. 50 species and subspecies. It is mainly Holarctic, but a few forms occur in the northernmost part of the Neotropical Region. They are nearly all bird fleas.

C. vagabundus insularis is an interesting species. It is found in the nests of seabirds such as Herring-Gull (*Larus argentatus*), Puffin, Fulmar, Shag (*Phalacrocorax aris-totelis*) and Cormorant (*Phalacrocorax carbo*), but also inland especially in the nests of Jackdaws (*Corvus monedula*) and crows (*Corvus* spp.)

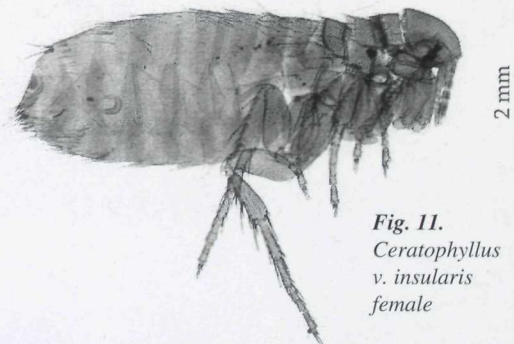


Fig. 11.
Ceratophyllus
v. insularis
female

Material examined:

Stóra Dímun – 23 males, 35 females – 17 July 1997 –

Kinna úr Dímun leg. – from nests of Kittiwakes
(*Rissa tridactyla*)

Mykines – 17 males, 18 females – 14 August 1998 –

Jens-Kjeld Jensen leg. – from nests of Kittiwakes
(*Rissa tridactyla*)

8. *Ceratophyllus gallinae gallinae*

(Schrank) – (figs. 12 and 13)

This bird flea has been known in the Faroe Islands ever since fleas were collected. In the Faroese language it is known as the “starling-flea” (stara loppa). It is one of the commonest – if not *the* commonest flea. It is recorded from about 75 different hosts; it prefers relatively dry nests in shrubs or trees and is especially common in the nests of Starlings, House Sparrows, crows, tits (*Parus* spp), owls (*Athene*, *Asio*, *Strix*, *Tyto*), wagtails (*Motacilla*) etc. It is a common flea of poultry and often becomes a real pest in hen-houses – it attacks man readily as most bird fleas do.

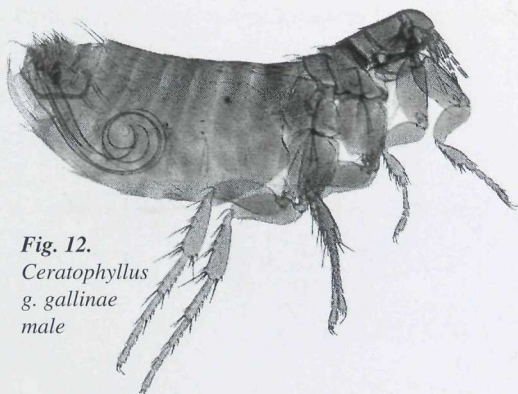


Fig. 12.
Ceratophyllus
g. gallinae
male

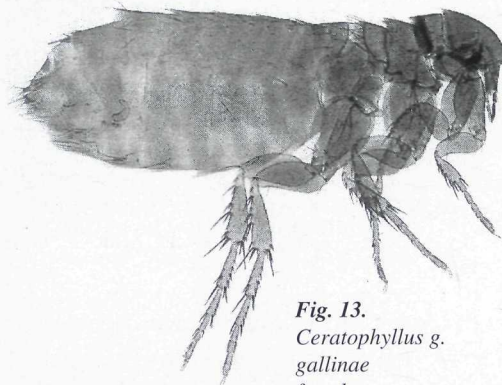


Fig. 13.
Ceratophyllus g.
gallinae
female

Material examined:

Tórshavn – 1 male – 19 April 1991 – Dorete Bloch leg

Tórshavn – 1 female – 6 May 1991 – Dorete Bloch leg.

Tórshavn – 1 female – 13 January 1992 – Dorete Bloch leg.

Tórshavn – 1 female – 21 May 1992 – Dorete Bloch leg.

Hvalvík – 1 female – 1 June 1992 – Dorete Bloch leg.

Tórshavn – 1 male, 2 females – 13 May 1994 – Dorete Bloch leg. – indoors.

Kollafjørður – 1 male Nov. 1995 – Jens-Kjeld Jensen leg. – on a Common Rat (*Rattus norvegicus*)

Tórshavn – 1 female – ? 1996 – Bergur Hanusson leg. – on a woman.

Nólsoy – 1 male – 25 May 1996 – Jens-Kjeld Jensen leg. – on a Whitethroat (*Sylvia communis*)

Nólsoy – 1 male – 16 December 1996 – Jens-Kjeld Jensen leg. – on a House Sparrow (*Passer domesticus*)

Tórshavn – 1 female – ? 1997 – Ruth Simonsen leg. – on a Cat (*Felis domestica*).

Nólsoy – 1 female – 2 May 1997 – Jens-Kjeld Jensen leg. – on a Chiffchaff (*Phylloscopus collybita*)

Nólsoy 1 male – 5 May 1997 – Jens-Kjeld Jensen leg. – on a Blackbird (*Turdus merula*).

Nólsoy – 1 male, 1 female – 11 May 1997 – Jens-Kjeld Jensen leg. – on a Whitethroat (*Sylvia communis*)

Nólsoy – 1 female – 21 May 1997 – Jens-Kjeld Jensen leg. – on a Chiffchaff (*Phylloscopus collybita*)

Nólsoy – 1 female – 31 May 1997 – Jens-Kjeld Jensen leg. – on a Blackbird (*Turdus merula*)

Sumba – 16 males, 56 females – 5 June 1997 – Jens-Kjeld Jensen leg. – from nests of Starlings (*Sturnus vulgaris*)

Klaksvík – 1 male – 16 June 1997 – Jens-Kjeld Jensen leg. – on a Crossbill (*Loxia curvirostra*)
 Nólsoy – 1 male – 26 June 1997 – Jens-Kjeld Jensen leg. – on a Rock Dove (*Columba livia*)
 Nólsoy – 4 males, 13 females – 10 July 1997 – Jens-Kjeld Jensen leg. – on Starling youngsters (*Sturnus vulgaris*)
 Sumba – 1 female – 14 July 1997 – Aksal Poulsen leg. – in a hen-house.
 Nólsoy – 1 male – 28 July 1997 – Jens-Kjeld Jensen leg. – on a Wren (*Troglodytes troglodytes*)
 Sandavágur – 2 males, 21 females – 10 August 1997 – Eyðbjørt Simonsen leg. – from a nest of a Starling (*Sturnus vulgaris*)
 Viðareiði – 17 males, 30 females – 10 August 1997 – Nils Jákup Absalonsen leg. – from a nest of a House Sparrow (*Passer domesticus*)
 Nólsoy – 2 females – 14 August 1997 – Jens-Kjeld Jensen leg. – from a nest of a House Sparrow (*Passer domesticus*)
 Nólsoy – 1 female – 28 August 1997 – Jens-Kjeld Jensen leg. – on a Wryneck (*Jynx torquilla*)
 Nólsoy – 38 males, 24 females – 1 September 1997 – Jens-Kjeld Jensen leg. – from a nest of a House Sparrow (*Passer domesticus*)
 Tórshavn – 1 female – 1 September 1997 – Jens-Kjeld Jensen leg. in a pigeon loft
 Klaksvík – 1 male – 2 September 1997 – Sólbjørn Hansen leg. – from a nest of a Blackbird (*Turdus merula*)
 Klaksvík 1 female – 2 September 1997 – Sólbjørn Hansen leg. – from a nest of a Fieldfare (*Turdus pilaris*)
 Nólsoy 1 male, 1 female – 3 September 1997 – Jens-Kjeld Jensen leg. – on a Rock Dove (*Columba livia*)
 Tvøroyri – 1 male – 8 October 1997 – Jens-Kjeld Jensen leg. – on a Starling (*Sturnus vulgaris*)
 Nólsoy – 1 male, 1 female – 28 March 1998 – Jens-Kjeld Jensen leg. – on a Blackbird (*Turdus merula*)
 Nólsoy – 1 male – 24 April 1998 – Jens-Kjeld Jensen leg. – on a Goldcrest (*Regulus regulus*)
 Tórshavn – 1 female – 25 April 1998 – Dorete Bloch leg. – indoors.
 Nólsoy – 1 female – 26 April 1998 – Jens-Kjeld Jensen leg. – on a Dunnock (*Prunella modularis*)
 Nólsoy – 1 female – 27 April 1998 – Jens-Kjeld Jensen leg. – on a Robin (*Erithacus rubecula*)
 Nólsoy – 1 female – 30 April 1998 – Jens-Kjeld Jensen leg. – on a Chiffchaff (*Phylloscopus collybita*).

Nólsoy – 1 male – 7 June 1998 – Jens-Kjeld Jensen leg. – on a Starling (*Sturnus vulgaris*)
 Tórshavn – 16 males, 16 females – 7 September 1998 – Jens-Kjeld Jensen leg. – from a nest of a House Sparrow (*Passer domesticus*).
 Nólsoy – 1 female – 9 October 1998 – Jens-Kjeld Jensen leg. – on a Goldcrest (*Regulus regulus*)
 Tórshavn – 2 females – 25 & 30 November 1998 – T. Sørensen leg. on a man.

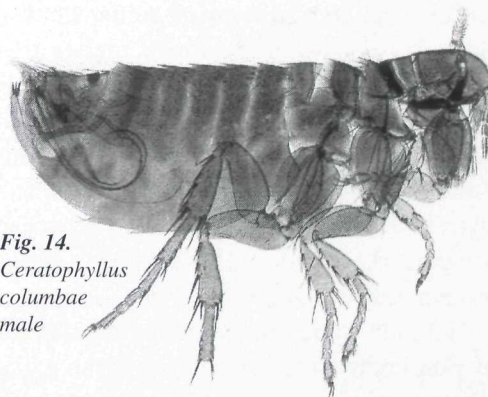


Fig. 14.
Ceratophyllus columbae
male

9. *Ceratophyllus columbae* (Gervais) – (figs. 14 & 15)

This flea has the Rock Dove and also the domestic form – the Feral Pigeon as a primary host. In Europe it is a widespread and fairly common species.

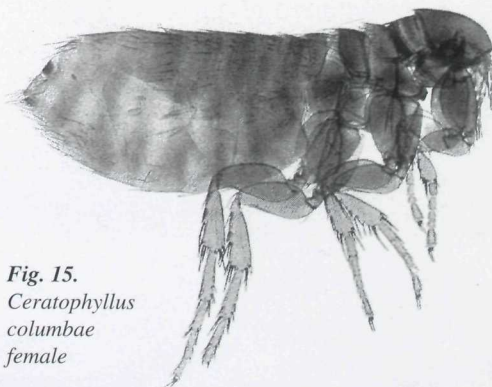


Fig. 15.
Ceratophyllus columbae
female

Material examined:

Nólsoy – 1 female – 3 September 1997 – Jens-Kjeld

Jensen leg. – on a Rock Dove (*Columba livia*)

Húsavík – 4 males, 13 females – 18 June 1998 – Jens-

Kjeld Jensen leg. – in a pigeon loft.

Even though fleas are universally disliked, they are as much part of the natural fauna of the Faroe Islands as the birds or the whales. But even we, who like them, realize that they will never be popular animals. We have just recorded a few new species and more can undoubtedly be found with a concentrated effort. In Greenland there are 7 species known so far, in Iceland 9, in the Shetlands 13 and in Ireland 38 species (Ólafsson, 1991; Jensen, 1998).

Not only is the distribution of the species incompletely known, but there are so many interesting aspects of fleas' lives, which need to be investigated and which will be truly rewarding for those who dare try.

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