

Bats (Chiroptera) in the Faroe Islands

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Úrtak

Í Føroyum er ongantíð skrásett, at flogmýs hava átt her, men ferðandi flogmýs eru skrásettar 11 ferðir síðani 1964. Staðfest varð, at seks av hesum flogmýsnum hoyrdu til trí sløg, allar hoyrdu til tey europeisku flogmúsasløgini, sum eru 30 í tali: Ein **Leislers flogmús**, *Nyctalus leisleri*, ein **hýggiflogmús**, *Vespertilio murinus* og fyra **trøllflogmýs**, *Pipistrellus nathusii*. Tað víða havið millum oyggjarnar og nakað meginland hevur havt tarnandi árin á flogmúsaútbreiðsluna á oyggjunum.

Tey trí sløgini eru millum tey 5-6 av teimum 30 europeisku sløgnum, sum verða mett sum flytisløg ella langvegis flúgvarar. Um tær vóru komnar higar óvirknar (við skipi) sum ein spjaðing av mannaávum, og eftirsum skip koma til Føroya frá nærum øllum støðum í Europa, høvdu nærum øll tey europeisku flogmúsasløgini verið væntandi – bert treytað av ovurnøgd og atburði teirra í tí havnini, har ið fermt verður. Tí tykist vera mest sannlíkt, at tær seks eyðmerktu flogmýsnar hava flogið allan vegin ella meginpartin av leiðini sjálvar, kanska stuðlaðar av undanvindi. **Leislers flogmúsin** kom ivaleyst úr Írlandi ella Bretlandi, **hýggiflogmúsin** allarhelst úr Noregi ella Danmark og **trøllflogmýsnar** frá at kalla hvar sum helst á meginlandinum móguliga um Bretland ella Noreg.

Introduction

Breeding populations of bats (Chiroptera) have never been found in the Faroe Islands, but since 1964 single vagrant bats have been recorded on eleven different occasions. We were able to obtain six of these bats and identify the species and they are kept at the Museum of Natural History in Tórshavn.

Reports (by D. Bloch and J.K. Jensen) to the local press about the first identified bats in the late eighties created an increased

interest among the public and resulted in more reports, including some of an earlier date. This makes it reasonable to suggest that vagrant bats may very well have reached the islands earlier than our first record from 1964, but that earlier occurrences were not reported.

Vagrant bats in the North Atlantic have been recorded from Orkney, Shetland, and British oil rigs (Corbet and Harris, 1991; Speakman *et al.*, 1991), Iceland (Koopman and Gudmundsson, 1966; Petersen, 1993), and even in Greenland. A list, including an analysis of all recorded bat occurrences in the North Atlantic, is in preparation (Baagøe *et al.*, in prep.).

Records and details

1. Unidentified bat observed flying around. **Á Trøðum, Sandoy**, summer, around 1964 (Eyðun Winther, pers. comm.).
2. Unidentified bat. **Hvalba**, around 1970 (Jákup Pauli Ludvig, pers. comm.).
3. Unidentified bat. **Sandavágur**, around 1980.
4. Unidentified bat. **Vestmanna, Streymoy**, 1986.
5. Leisler's bat, *Nyctalus leisleri*, ♂ ad. **Mykines**. June 28, 1984 and the following days some ornithologists observed a bat flying in full daylight hunting insects over the airstrip on Mykines. July 15 a bat (almost certainly the same individual) was found roosting in a nearby small hut, apparently weak or lethargic. The bat was collected by Mr Albin Thomsen and died in captivity July 21.
6. Nathusius's pipistrelle, *Pipistrellus nathusii*, ♀ ad. **Miðvágur**. February 17, 1987. Found in a weak state outside the school building and collected by the school teacher.



Fig. 1. og 2. **Leisler's bat**, *Nyctalus leisleri*.
Photo: Jürgen Gebhard, Basel.

Mynd 1. og 2. **Leislers flogmús**, *Nyctalus leisleri*.
Photo: Jürgen Gebhard, Basel.

7. Nathusius's pipistrelle, *Pipistrellus nathusii*, ♀ ad. Weight 5.5 g. **Nólsoy**. From December 5, 1987 regularly seen flying about until December 27 when it was collected (Jens-Kjeld Jensen, pers. comm.).
8. Particoloured bat, *Vespertilio murinus*, ♀ ad. Weight 8.4 g. **Sandavágur**. June 27, 1988, Tórir Gudmudson found this bat in a weak state while working in his garden. Killed and collected June 28.
9. Unidentified bat. Around November 1, 1989 (Jens-Kjeld Jensen, pers. comm.). In very strong winds sailing on **Munkagrunnin** south of Suðuroy (approximately 61°05'N-06°35'W), two fishermen found a bat hanging in a split near one of the wheel-house windows of the boat. The animal was dark brown and of an estimated length of 5 cm. It remained on the boat for about a week, but was finally caught and put in a box from which it however escaped after they had reached **Vágur** on Suðuroy.
10. Nathusius's pipistrelle, *Pipistrellus nathusii*, ♂ ad. Weight 5.9 g. **Sumba, Suðuroy**. Seen flying in the morning of January 9, 1992. Later the same day it

flew against the concrete wall of a house. It was sent to the Museum of Natural History in Tórshavn where it was killed on January 11. There was a storm at Sumba January 31, 1991.

11. Nathusius's pipistrelle, *Pipistrellus nathusii*, ♀ ad. weight 6.2 g. **Lopra, Suðuroy**. Found October 1, 1992 flying around in the school. Sent to the Museum of Natural History the next day.

Discussion

Apart from no. 9 on the list, which travelled at least the last part of the way by ship, it is not known how these bats got to the Faroe Islands. Is it likely that they flew all or part of the way themselves, perhaps aided by favourable winds i.e. active dispersal? Or did they travel passively, transported by man? Whereas the majority of the vagrant bats recorded from Iceland are North American species (Petersen, 1993), all 3 species recorded from the Faroe Islands belong to the European bat fauna.

The 30 European bat species are very different in their willingness to fly over



Fig. 3. og 4.

Nathusius's pipistrelle, *Pipistrellus nathusii*. Photo: Jürgen Gebhard, Basel.

Mynd 3. og 4.

Trøllflogmýs, *Pipistrellus nathusii*. Photo: Jürgen Gebhard, Basel.



greater distances and can be separated into stationary species and long distance fliers – migrators (Strelkov, 1969). It seems to be mainly the northernmost parts of the migrating species populations that undertake actual, regular and unidirectional migrations to more favourable hibernation sites further south. But the capability of long and multidirectional movements remain preserved in other populations of those species (Gaisler, 1979). Gaisler and Hanak (1969) also introduced an intermediate category, known as vagrant, of species that sometimes fly shorter distances (up to 400 km) between summer roosts and hibernation sites. In general, the quantitative basis for classification is more meagre for bats than for birds, but the amount of information is increasing. Five to six species are believed to be migratory.

Leisler's bat, *Nyctalus leisleri*: On the Continent, the northern border of distribution runs through the northern part of middle Europe (Stebbing, 1988). In the west, Leisler's bat occurs in the Nether-

lands (Lina, 1990a), Belgium (one record), central and southern parts of France, but not in NW France (Stebbing, 1988) and it is widely distributed in Spain and Portugal (Palmeirim, 1990; Ibañez *et al.*, 1992). It also occurs in the southern half of England and in the whole of Ireland where it is more common than elsewhere (Stebbing, 1988; Racey, 1991). It is the only bat species that occurs on the Azores and it is also found on Madeira. Closer to the Faroe Islands a vagrant Leisler's bat was found in Shetland in 1968 (Corbet, 1970).

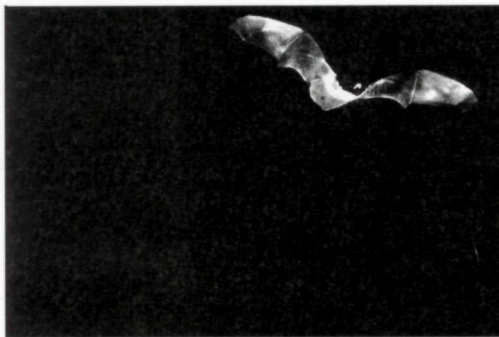
It is considered a migratory species (Strelkov, 1969; Racey, 1991) and it is certainly capable of flying long distances. Longest flights recorded are 418 km (Krzanowski, 1960), and 810 km (Aellen, 1983-84) and Aellen (1962) caught 25 apparently migrating individuals in Switzerland.

Nathusius's pipistrelle, *Pipistrellus nathusii*: On the continent, the northern distribution limit runs along the coasts of France, Belgium, the Netherlands, through NW Germany (Stebbing, 1988) and Denmark



Fig. 5. og 6.

Mynd 5. og 6.

Particoloured bat, *Vespertilio murinus*. Photo: Jürgen Gebhard, Basel.**Hýggiflogmús**, *Vespertilio murinus*. Photo: Jürgen Gebhard, Basel.

incl. N. Jutland (Baagøe, 1991 and unpubl.), and south and middle Sweden (Gerell and Lundberg, 1983; Gerell and Ahlén, 1992). The species is common in Estonia (Masing, 1988; 1990) and Latvia (Petersons, 1990) and it has also been found in the southernmost part of Finland (Lehmann, 1983). It is not believed to breed in Great Britain and Ireland, but a number of individuals have been found in England, Scotland, the Channel Islands, Shetland and on North Sea oil rigs, perhaps suggesting a migration to Great Britain for hibernation (Speakman *et al.*, 1991). There are two records from southeast Iceland, believed to have arrived "ship-assisted" (Peterson, 1993).

Migration and long distance flights are well documented for this species (e.g. Strelkov, 1969; Kock and Schwarting, 1987; Oldenburg and Hackethal, 1989; Petersons, 1990). In particular, intensive ringing in Latvia and Estonia showed that individuals flew south-west from summer roosts in the Baltic states (and probably Russia) to hibernate, some all the way to

the Netherlands, Belgium, France, Switzerland and north Italy (Masing, 1988; Petersons, 1990; Lina, 1990b). A number of animals flew over 1600 km, the longest distance being 1905 km. Out of two individuals ringed in south Sweden, one was found in the middle of Germany (Kock and Schwarting, 1987) and one in Belgium (Gerell, 1987).

The particoloured bat, *Vespertilio murinus*: Based on the westernmost indication of breeding, the western distributional limits can be said to run from eastern France and Switzerland, north-eastwards through south Germany, and then to east Germany or Poland (a single nursery is seen near Rostock on the German Baltic coast, Zöllnick *et al.*, 1989). The distribution in Scandinavia goes through eastern Denmark (Baagøe, 1986; Baagøe and Jensen, 1990), the Swedish coast and in Sweden up to 60-61 N° (Ahlén, 1986) and southern Norway (Stebbing, 1988; Baagøe, in press; Rydell and Baagøe, in press). It seems rare or absent over much of western and southern

Europe (Stebbing and Griffith, 1986), but is very common in northeast Zealand, Denmark (Baagøe, 1986) and common in southern Sweden (Ahlén, 1986).

Numerous vagrants have been found far from their normal range (Baagøe, in press; Rydell and Baagøe, in press) including records from the south and central parts of England, three from Shetland and one from a North Sea oil rig (Racey, 1991). It is certainly a long distance flier and is considered a migratory species (Strelkov, 1969; Stebbings, 1988; Racey, 1991). Longest recorded flights of ringed individuals are 360, 800, and 850 km (Strelkov, 1969). However, frequent winter occurrence in Scandinavia and parts of continental Europe suggests that at least some populations, or parts of them, are rather stationary (Baagøe, 1986; Cervený and Bürger, 1990; Rydell and Baagøe, in press).

Conclusion

Of the 30 European bat species, only 3 have been found in the Faroe Islands. All three species are among the 5-6 European species considered to be migratory and long distance fliers (Stebbing, 1988). The long oceanic gap between the Faroe Islands and mainlands with bat populations has had a filter effect on bat dispersal to the islands.

If the bats had dispersed passively by human aid (ships) through anthropochore dispersal (Udvardy, 1969), and since ships reach the Faroe Islands from nearly all parts of Europe, almost any of the European bat species could have been expected – only depending on their abundance and behaviour in the port of embarkation. There-

fore the 6 identified bats most likely flew all or most of the way themselves; Leisler's bat probably came from Ireland or Britain, the particoloured bat perhaps from Norway or Denmark, and the Nathusius's pipistrelles from nearly anywhere on the Continent, perhaps via Great Britain or Norway.

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