Activities of Finnish bird stations in 1968

OLAVI HILDÉN

The year 1968 must be regarded as a very successful one as regards the activity of Finnish bird stations. All of our nine stations (see HILDÉN 1968) were manned at least some weeks during the migration seasons, and at both Aland stations, Signilskär and Lågskär, observation continued without interruption almost the whole spring and autumn. The periods of observation are shown in Fig. 1. The effectivity of the bird station activities in 1968 is illustrated, for instance, by the fact that a new record was attained in the numbers of birds ringed and that no less than four species new to Finland were observed.

The present article is a brief report of the main results of the work done at Finnish bird stations in 1968, in the same manner as the earlier report of 1967 (HILDÉN 1968). All comparisons between these two years refer to this earlier review. The most interesting observations and special features of migration at each station have been described in more detail in Finnish in the first issue of 'Lintumies' 1969.

Irregular migrants

The most remarkable ornithological phenomenon in 1968 was the large-scale irruption of Slender-billed Nutcrackers (Nucifraga caryocatactes macrorbynchos), the largest ever recorded in Finland and conspicuous in the whole of western Europe. It started in late July, reached its peak shortly after mid-August and ceased almost entirely in early September. After this, only small numbers of birds which failed to straggle further were seen at Signilskär, Lågskär and Jurmo; they starved in the course

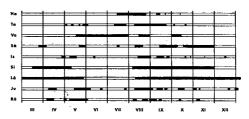


FIG. 1. Periods of observation at the Finnish bird stations in 1968. (*Lintuasemien bavaintojaksot 1968*.)

of a few weeks. In the first phase of the irruption the Nutcrackers migrated predominantly in a NW-N direction, but after about August 20 the direction was reversed and the birds straggled back E and NE. The numbers recorded at single stations varied markedly, depending on the situation of the station along or beside the topographical leading lines of the coast and islands chains. Thus the great majority of Nutcrackers were seen at Valassaaret, owing to the fact that the station is situated at the focal point of the leading line from SE to NW over the Gulf of Bothnia, composed by the archipelago of Vaasa and the islands located on the Swedish side. About 3000 birds were counted here on the peak day, August 15, flying towards the Swedish coast in NW. The peak days and numbers recorded at some other stations were as follows: Tauvo, 607 on August 14; Isokari, 534 on August 19; Lågskär, 461 on September 1; Signilskär, 251 on August 21 and Säppi, 140 on August 18.

A total of 422 Nutcrackers were ringed at the bird stations, mainly at Lågskär. Up till now, 12 recoveries have been reported, all from the Soviet Union, ESE to SE of the ringing place, and most of them in September—October. The remotest recoveries came from Perm, Sverdlovsk and Novosibirsk, about 2200, 2300 and 3300 km, respectively, from the ringing place. The irruption of the Nutcracker will be analysed in detail in a later number of Ornis Fennica.

Small numbers of migrating Great Spotted Woodpeckers (*Dendrocopos major*) were observed in the spring at some bird stations, but not as frequently as in 1967: 17 at Jurmo between April 9 and 18, also 17 at Lågskär between April 4 and 30, and 12 at Signilskär between April 16 and 17. This is more than normal. The autumn invasion of the species reached much greater proportions than in the previous year. As in

1967, the irruption was stronger and occurred earlier on the west coast than farther south. At the three northernmost stations, the largest numbers were recorded in mid-August, e.g. hundreds at Tauvo on the 15th (174 ringed) and about 600 at Hailuoto on the 16th. At Isokari, the peak fell on August 21 when no less than 1100 were observed and 164 ringed. At the four southern stations, the invasion culminated at the end of August, but the daily numbers totalled only some dozens of birds. The irruption weakened in September, but some individuals were seen right up to late October.

The ringing yielded a total of 1606 Great Spotted Woodpeckers, against only 181 in 1967. As usual among irrupting birds, juveniles were most strongly predominant: out of 1050 ringed at four stations, only about 9 % were adults. Four recoveries have been reported up till now. One Woodpecker. ringed at Jurmo on August 24, was controlled two days later at Isokari, so it had migrated 105 km to the NNW. Another bird, ringed at Hailuoto on August 17, was trapped at Lista, the southernmost point of Norway, on October 2. Two other recoveries, in late October and November, came from the Soviet Union. To test whether the invading Woodpeckers regularly migrate at first in a W to SW standard direction and then reverse direction returning to their native region in the east, as suggested by these recoveries as well as by the similar course of the Nutcracker irruption, I have plotted all 16 distant recoveries of Great Spotted Woodpeckers ringed in Finland in Fig. 2. The dates of findings imply, in fact, some kind of loop migration in the irruptions of the species in Northern Europe: the early recoveries in September and the first days of October are from Sweden and Norway, WSW—SSW of the ringing places, whereas the later recoveries from

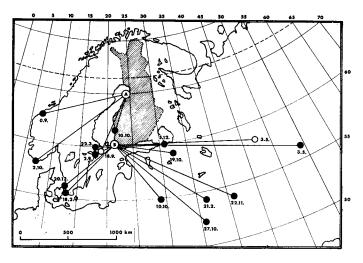


Fig. 2. Distant recoveries of the Great Spotted Woodpecker ringed in Finland. Big open circles refer to place of ringing: A = bird stations of Hailuoto and Tauvo, B = bird stations of Säppi, Signilskär, Lågskär, Jurmo and Rönnskär, as well as three other places of ringing elsewhere in SW Finland. Filled circles indicate the place of recovery in the same year or the following spring and little open circles that in later years. (Suomessa rengastettujen käpytikkojen kaukolöydöt.

Rengastuspaikat merkitty isoilla ympyröillä: A = Hailuoto ja Tauvo, B = Säppi, Signilskär, Lågskär, Jurmo, Rönnskär sekä muu Lounais-Suomi. Löytöpaikat merkitty mustilla (rengastusvuoden tai seuraavan kevään löydöt) tai avoimilla ympyröillä (myöhemmät löydöt).)

mid-October onwards are mainly from the Soviet Union, SP—E of the ringing places. Some of the Woodpeckers remain in Scandinavia in the course of migration, as shown by the three winter recoveries in Sweden, the proportion of these birds probably being correlated with the food supply in the invaded areas. The two finding places in the Soviet Union, where the birds were recovered during the breeding period (both on May 3), are situated 1280 and 1940 km respectively from the ringing places, proving that the irruptions originate at least partly from very remote eastern regions.

Three-toed Woodpeckers (*Picoides tridactylus*) and Lesser Spotted Woodpeckers (*Dendrocopos minor*) also showed signs of migration approaching invasion proportions in 1968. Some individuals of the former were observed at all stations, except Rönnskär, in September—October and 21 were banded. The latter was recorded in August—November at Säppi, Isokari, Signilskär,

Lågskär and Jurmo, one to five at each, and no less than ten were ringed at Tauvo. One bird, ringed at Signilskär in August, was found the following April at Strömstad, on the Swedish west coast, 480 km WSW. Both species are known as irregular migrants in Finland, occurring more commonly at intervals and even crossing the sea, although in very small numbers compared with *Dendrocopos major*. Recently, such autumns of marked migratory movements have been 1956, 1964 and 1965 for *Picoides tridactylus* and 1956, 1959 and 1965 for *Dendrocopos minor*.

All the other irregular migrants occurred in moderate to extremely small numbers. Crossbills (mainly Loxia curvirostra) were seen at all stations, but only rarely, the largest flocks consisting some 20—25 birds. The first ones appeared in late May and early June. The straggling then levelled off until a second wave occurred in September—October. Two observations of Two-

barred Crossbills (*Loxia leucoptera*) were reported: one \$\varphi\$ at Tauvo on August 9 and 3 birds at Säppi on September 17.

Redpolls (Carduelis flammea) were scarcer than normal and no big flocks were seen at the bird stations. This was contrary to expectations in view of the very high population density in Lapland the preceding summer (see HILDÉN 1969). Waxwings (Bombycilla garrulus) occurred in quite exceptionally small numbers, the biggest flocks consisting of only some dozens of birds, as against many hundreds in most autumns. Pine Grosbeaks (Pinicola enucleator) were recorded only at Säppi on five days between October 24 and November 21, the largest flocks consisting of 10 birds.

Of the tits, only Great Tits (Parus major) migrated in moderate numbers. considerably larger than the preceding autumn, as indicated by the numbers ringed at bird stations: 154 in 1967, 277 in 1968. Only a few Blue Tits (*P*. caeruleus) were observed at each station. Coal Tits (P. ater) were even less numerous and they were not at all seen most stations. Neither could any marked migration of Willow Tits (P. montanus) be noted on the coast of the northern part of the Gulf of Bothnia, as in 1966 and 1967. Thus only 57 were ringed at Tauvo, against 364 and 322 in the two previous years. Of particular note was the trapping of two Siberian Tits (P. cinctus) on October 19 at Tauvo; in addition, 2—3 were seen on the same day. Small straggling groups and flocks of Long-tailed Tits (Aegithalos caudatus) visited Valassaaret, Säppi and Jurmo in October but not the other stations.

Contrary to the large-scale irruption of Treecreepers (*Certhia familiaris*) in the autumn of 1967, the species was a rarity at the bird stations in 1968. Only a few were seen and no more than six were ringed (354 in 1968!); at Isokari, Lågskär and Rönnskär no Treecreepers

were observed at all. Similarly, Goldcrests (*Regulus regulus*) were much fewer in numbers than in the previous autumn. The fact that, in spite of this, even more were ringed at Signilskär and Lågskär, is to be attributed to the introduction of new English bird nets, which, especially for trapping very small birds like *Regulus* and *Phylloscopus*, are quite superior to the Japanese nets.

The Tengmalm's Owl (Aegolius funereus) was an extremely scarce visitor at the bird stations, quite the opposite of the situation in 1967. At Signilskär, for instance, only 8 individuals were ringed, whereas the corresponding result was 172 for the preceding year. The breeding population, too, was scanty in most parts of Finland owing to the scarcity of small rodents.

Eastern rarities

The autumn of 1968 was quite remarkable as far as eastern rarities were concerned. Even in the previous autumn records of Asiatic species were more frequent than usual at the Finnish bird stations but in 1968 observations were still greater in number. This may be due, at least partly, to the eastern winds prevailing almost the whole autumn.

Phylloscopus inornatus. In 1968, the sum total of previous records in Finland more than doubled. The species was observed at Tauvo (September 13), Isokari (September 26), Signilskär (September 23—October 3, probably 6 different birds) and Lågskär (September 29—October 4, about 3 individuals). Apart from being observed at the bird stations it was also seen near Helsinki (September 10) and in Kajaani (September 30). Three of the birds were ringed. In Britain, too, Yellow-browed Warblers were more numerous than normal, a total of 48 individuals being reported (Ferguson-Lees & Sharrock 1968 and 1969, Sharrock & Ferguson-Lees 1968 and 1969).

Ph. proregulus. The autumn of 1968 also

produced for this Asiatic warbler more records than all previous autumns together. The first was trapped at Lågskär on September 29 (the earliest record in Finland, all the others being from October), and the last was seen on October 11 at the same locality. During this short period, a total of nine birds were observed at the bird stations, including one at Säppi, two at Signilskär and about six at Lågskär. In addition, two birds were reported from Helsinki, on October 3 and 19. Six of the birds were ringed. In Britain, no less than 18 Pallas' Warblers were recorded, almost doubling the previous total (Ferguson-Lees & Sharrock 1968).

Ph. fuscatus. On October 24 one individual of this species, new to Finland, was trapped at Säppi. At about the same time, the Dusky Warbler was also trapped in Ottenby as new in the Swedish fauna (Larsson 1969), and no less than five birds were recorded in Britain (Ferguson-Lees & Sharrock 1968).

Acrocephalus dumetorum. One individual was trapped at Lågskär as late as October 17. The previous scanty autumn records in Finland are all from August.

Anthus novaeseelandiae. For the second consecutive year Richard's Pipits were more numerous than normal in Finland, though the numbers fell short of those for 1967. At the bird stations, the species was recorded only at Signilskär and Lågskär, where altogether 12 individuals were seen between August 16 and October 6.

Emberiza rustica. Rustic Buntings occurred at the stations in 1968 more frequently than ever before. At Tauvo, where the species is an annual autumn visitor in small numbers, several birds were noted almost daily from mid-August to mid-September, no less than 20 and 29 being counted on the peak days, September 1 and 2. Ringing yielded a total of 46, against 27 in 1967 and 12 in 1966. At Hailuoto, the other northern bird station, the commonness of Rustic Buntings is illustrated by 24 individuals ringed. Exceptionally high numbers were recorded at the more southern stations: 1—9 birds daily at Säppi during September 14—19; about 30 at Isokari

between August 27 and September 25, with a peak of at least 14 on September 14; at least 16 at Signilskär between September 3 and October 3; 1—4 almost daily at Lågskär during the period September 4—25, totalling about 22 birds. At Jurmo, however, only one was seen, on August 27.

E. pusilla. The autumn's total at the bird stations was 12, markedly more than normal, including seven at Tauvo (all ringed) between July 26 and August 27, two at Valassaaret on August 26, as well as single birds at Säppi (September 21), Signilskär (November 3—4) and Lågskär (October 1—2).

E. aureola. At Tauvo, where the species breeds near the station, almost ten probable passage migrants were recorded or ringed between July 23 and August 9. In the southwestern part of Finland the species is an extremely rare visitor during migration, not being reported more than about three times, but 1968 brought an additional record from Säppi on July 16. There is doubt as to whether this bird was a belated individual from the spring migration or a first wanderer of the autumn one.

E. leucocephala. On November 4 a juvenile male was trapped at Lågskär (VUOLANTO 1969). This was the first record in Finland.

Other rarites

The intensive observation activity at the bird stations produced naturally a long list of other rarities. Only the most remarkable records are mentioned here.

Anas strepera. One bird was seen at Säppi in late May.

Polysticta stelleri. A stationary flock, consisting of 9 & \$\delta\$ and 7 $\cip \cip$, stayed at Lågskär in early March, being recorded for the last time on the 8th. On December 15, a flock of 4 & δ and 8 <math>\cip \cip \cip$ reappeared on the island, staying there until the end of the observation period. These records are highly suprising, as the species in considered to have become rarer as vagrant both in Finland and in Sweden this century; there are, in fact, only about 15 previous$

records in Finland since 1940, all concerning 1—4 birds only and most of them from recent years. Possibly the species winters regularly in the southern part of Åland Sea, this having been overlooked before.

Falco vespertinus. On August 28 one juvenile was observed at Isokari.

Stercorarius skua. On July 17 one vagrant was seen at Valassaaret in the company of two Arctic Skuas (S. parasiticus). Fifth record in Finland.

Streptopelia turtur. No less than seven records were made, including four at Lågskär (May 11—12, September 8 and 13—14, October 3) and one at Jurmo (May 28), Säppi (May 30) and Signilskär (August 16). The species has been noted more and more frequently at the bird stations in recent years, being now an annual visitor.

S. decaocto. Recorded at Valassaaret on June 6.

Upupa epops. Visited Lågskär twice, on April 23—25 and May 15—19.

Galerida cristata. One migrant was seen at Lågskär on October 10. This is one of the very few vagrants in Finland, which have been recorded more rarely in recent times than earlier in spite of greatly intensified birdwatching activity, as illustrated by the number of records during last decades: 1930—39 6, 1940—49 6, 1950—59 4 and 1960—68 4. This indicates a marked decrease in the northern populations of the species.

Calandrella cinerea. Observed at Lågskär on December 14. Eighth record in Finland.

Phoenicurus ochruros. Two birds were recorded at Lågskär (April 15 and 16) and one at Signilskär (October 18). The species is now an annual visitor at the southern bird stations, mainly in April-May.

Sylvia nisoria. A juvenile was trapped on August 24 as far north as Tauvo and controlled there two days later. Even in 1966 four birds were trapped at Tauvo and one at Valassaaret, these observations indicating some kind of premigratory movements partly in a northerly direction, as in *S. atricapilla*.

S. cantillans. On May 30 a juvenile & was trapped at Jurmo. This was the second Finnish

record, the first being made only four days earlier in Helsinki.

Regulus ignicapillus. One individual stayed at Lågskär from December 19 for at least three weeks (Vuolanto 1969). New species to Finland.

Lanius minor. Observed at Jurmo on May 26 and 29, possibly two different birds.

Emberiza calandra. A stationary bird at Lågskär on May 11—14.

Termination of the autumn migration

The autumn of 1968 was very cold in Finland quite the opposite of the situation the previous year. During the last third of August and first week of September there was unusually warm weather, but on September 9 the temperature suddenly dropped over the whole country and then stayed almost continuously much below average up to late November. The first snow fell in Lapland as early as mid-September, and on October 5—7 in south Finland.

The autumn migration of most species therefore terminated earlier than usual. The migration season of Turdus iliacus, T. philomelos, Erithacus rubecula, Regulus regulus, Motacilla alba, Lanius excubitor, Carduelis spinus and Fringilla montifringilla, for instance, was over by the end of October, while it normally extends a good way into November. Likewise the day of heaviest migration for Emberiza citrinella recorded both at Signilskär and at Lågskär was on October 9, about two weeks earlier than average, and the migration peak of Pyrrhyla pyrrhula at both these stations occurred as early as mid-October.

Against this background it was surprising to have so many very late observations reported. Scattered Warblers and Flycatchers, in particular, stayed far longer than normal, as shown by the following last records at Signilskär and Lågskär:

	Signilskär	Lågskär Oct. 17			
Sylvia borin	Oct. 21				
S communis	Oct. 1	Oct. 4			
S. curruca	Oct. 2	Oct. 10			
Acroceph. schoenobaenus	Oct. 2	Oct. 9			
Ficedula hypoleuca	Oct. 8	Oct. 1			
Muscicapa striata	Oct. 3	Oct. 11			

A Lesser Whitethroat (Sylvia curruca) was observed extremely late as far north as Tauvo on October 19 (thick snow cover!), and two Garden Warblers (S. borin) at Valassaaret on October 11 also deserve mention. Outside the bird stations, many late records were reported from Helsinki, including e.g. Hirundo rustica on November 6, Luscinia svecica on October 18, Acrocephalus schoenobaenus on October 4, Ficedula hypoleuca on October 9, Muscicapa striata on October 21 and, perhaps most surprisingly, no less than six individuals of Lanius collurio between October 20 and November 10 (Aro 1968).

The delayed departure in 1967 was supposed to be due to the very warm autumn (HILDÉN 1968). As the autumn of 1968, on the contrary, was very cold, this explanation is naturally ruled out. It seems to me that the reason for the delayed departure of many insectivorous passerine birds in 1968 is to be sought in the sudden and extreme cold in late September and in October, as paradoxical as this at first may sound. Although unusually warm weather in autumn may cause migrants to stay longer than normal, unusual cold may have the same effect on birds depending on insect food, as it means that the lack of food reaches critical proportions. Starving birds soon weaken and are unable to migrate further; if the cold weather with accompanying food shortage continues they lose their migratory urge and finally succumb.

This was apparently the case with the belated Red-backed Shrikes in Helsinki which stayed a long time at the same localities without trying to migrate any longer. One of them was captured by hand on November 1 in deep snow and weighed only 21.7 grams. Later I took this bird in my baggage to the Canary Islands and released it there in a banana plantation!

Ringing work

A total of 35467 birds were ringed at Finnish bird stations in 1968. This is about 8000 more than the previous annual record from 1967. The table below shows, for the 15 most numerous species, the numbers of birds ringed as well as the sum total at each station.

The highly differing results at single stations do not correspond the true differences in the occurrence of the species in question, but are merely due to the number and quality of the traps used, the effectiveness of the ringers as well as the periods of observation, in which respects there are great differences between the stations.

Compared with the results of 1967, the clear first place of the Willow Warbler (*Phylloscopus trochilus*) is conspicuous, especially when one bears in mind the return of winter with frost and heavy snowfall in late May in 1968, during which hundreds of Willow Warblers and other small passerines arriving late were found dying or dead. Obviously the effects of this catastrophe were hardly noticeable any longer in the numbers present in the autumn.

Another striking feature is the large number of Blackcaps (*Sylvia atricapilla*). This species is a rather scarce breeding bird in Finland. The total population was estimated by MERIKALLIO (1958) as only 10 000 pairs as against 690 000 of *S. borin*. In spite of this at some stations even more Blackcaps than Garden Warblers were ringed, and in the ringing totals the rarer species is outnumbered by hardly more than 3:2. This can hardly be explained just by the possibly greater inclination of Blackcaps to stop and rest on small islands in the

Table 1. Numbers ringed of the 15 most numerous species and total ringing results at the Finnish bird stations in 1968. (Rengastustulokset 15 runsaimman lajin osalta sekä rengastusten kokonaismäärät Suomen lintuasemilla 1968.)

	Ha	Та	Va	Sä	Is	Si	Lå	Ju	Rö	Total Yht.
Phylloscopus trochilus	1481	2360	4	42	403	608	1093	147	211	6349
Erithacus rubecula	9	82	16	296	331	772	1595	53	97	3251
Phoenicurus phoenicurus	47	429	3	79	378	628	632	238	80	2514
Carduelis flammea	34	936	317	207	53	293	209	1	7	2057
Turdus iliacus	163	754	99	103	64	159	353	19	13	1727
Fringilla coelebs	319	117	3	39	96	190	868	30	58	1720
Dendrocopos major	375	227	2	24	436	121	258	115	48	1588
Muscicapa striata	313	109	8	13	127	253	347	193	74	1437
Fringilla montifringilla	412	155	5	14	9	93	488	2	1	1179
Sylvia borin	26	187	2	10	114	146	338	238	41	1102
Regulus regulus	1	9	4	246	18	227	544	31	5	1085
Turdus philomelos	15	186	5	58	111	182	385	3	21	966
Sylvia atricapilla	5	55	2	14	149	199	162	88	36	710
Emberiza schoeniclus	13	508	8	6	5	4	43			<i>5</i> 87
Ficedula hypoleuca	26	26	_	1	93	137	167	105	32	587
Total							***			
Yht.	3876	7874	1526	1551	2909	5049	9975	1674	1033	35467

outer archipelago but it must be a result of reversed autumn migration, which is supposed to exist in this species, just as with *S. nisoria* (MERILÄ & MIKKOLA 1967, HILDÉN 1968). It is to be noted that the Blackcap does not breed as far north as in the surroundings of Oulu, yet it was ringed in considerable numbers at nearby Tauvo.

Selostus: Toiminta Suomen lintuasemilla 1968.

Vuonna 1968 kaikki maamme 9 lintuasemaa olivat toiminnassa ainakin osan muuttokaudesta (havainnointijaksot kuvassa 1). Kirjoituksessa tarkastellaan eräitä toiminnan päätuloksia.

Vaelluslintujen osalta huomattavin tapahtuma oli pähkinähakin suuri invaasio heinäkuun lopulta syyskuun alkuun. Vaellussuunta oli

aluksi NW-N, myöhemmin E-NE. Yksilömäärät eri asemilla vaihtelivat paljon riippuen asemien sijainnista johtolinjoihin nähden; eniten hakkeja nähtiin Valassaarilla (huippupäivänä 15.8. n. 3 000). Rengastetuista 422 yksilöstä on toistaiseksi ilmoitettu 12 löytöä, kaikki Venäjältä ja kaukaisin 3 300 km:n päästä. Käpytikan syvsvaellus oli verraten voimakasta, etenkin länsirannikon asemilla, joilla huippuvaiheessa elokuun puolivälissä havaittiin useita satoja päivässä. Rengastetuista linnuista n. 91 % oli nuoria. Tähänastiset kaukolöydöt (kuva 2) viittaavat siihen, että käpytikat aluksi vaeltavat pääasiassa lännen ja etelän välisiin suuntiin, mutta kääntyvät sitten Skandinaviassa ja palaavat vielä samana syksynä itäisille kotiseuduilleen; osa jää matkan varrelle. Myös pikkuja pohjantikalla ilmeni heikkoa syysvaeltelua. Kaikki muut vaelluslinnut esiintyivät lintuasemilla enintään kohtalaisesti (talitiainen, pikkukäpylintu) tai niukasti (muut).

Itäisiä harvinaisuuksia nähtiin lintuasemilla enemmän kuin koskaan ennen: kirjosiipiuunilintuja n. 11, hippiäisuunilintuja n. 9, isokirvisiä 12, pikkusirkkuja 12 ja pohjansirkkuja useita kymmeniä. Suomelle uusina lajeina rengastettiin ruskouunilintu (*Phylloscopus fuscatus*) Säpissä ja mäntysirkku (*Emberiza leucocephala*) Lågskärillä, molemmat siperialaisia lajeja. Monien muiden harvinaisuuksien joukossa oli kaksi muutakin maalle uutta lajia: rusorintakerttu (*Sylvia cantillans*) Jurmossa ja tulipäähippiäinen (*Regulus ignicapillus*) Lågskärillä.

Hyvin kylmän syksyn johdosta useimpien lajien muutto päättyi varhain, mutta etenkin kertuista ja siepoista tehtiin paljon yllättävän myöhäisiäkin havaintoja. Kirjoittaja otaksuu tämän johtuvan siitä, että syyskuun lopun ja lokakuun hyvin kylmä sää ja sen aiheuttama ravintopula heikensivät viivytteleviä hyönteissyöjiä siinä määrin, etteivät linnut pystyneet muuttamaan ajoissa pois.

Vuoden aikana rengastettiin lintuasemilla 35 467 lintua. Eri asemien tulokset sekä 15 eniten rengastetun lajin määrät on esitetty taulukossa 1. Pajulinnun ylivoimainen ykkössija on yllättävä, kun otetaan huomioon toukokuisen takatalven juuri tälle lajille aiheuttamat huomattavat tappiot. Mustapääkertun suurten rengastuslukujen oletetaan johtuvan pohjoiseen suuntautuvasta "esimuutosta".

References

- Aro, M. 1968. Helsingin lintusyksy 1968. (Summary: Autumn migration in 1968 at Helsinki.) Lintumies 4:83—89.
- Helsinki.) Lintumies 4:83—89. Ferguson-Lees, I. J. & J. T. R. Sharrock 1968. Recent reports. Brit. Birds 61:576— 580.
- 1969. Recent reports. Ibid. 62:87—88. HILDÉN, O. 1968. The bird stations of Finland and their activities in 1967. Ornis Fenn.
- and their activities in 1967. Ornis Fenn. 45:58—65.
- 1969. Über Vorkommen und Brutbiologie des Birkenzeisigs (Carduelis flammea) in Finnisch-Lappland im Sommer 1968. Ibid. 46:93—112.
- L(ARSSON), E. 1969. Fågelstationernas bokslut 1968. Sveriges Natur 60:35—39.
- MERIKALLIO, E. 1958. Finnish birds. Their distribution and numbers. Fauna Fenn. 5:1—181.
- Merilä, E. & H. Mikkola 1967. Mustapääkertun syysesiintymisestä Oulun seudulla. (Summary: On the autumnal occurrence of blackcaps (Sylvia atricapilla) at Oulu.) Lintumies 3:78—79. Sharrock, J. T. R. & I. J. Ferguson-Lees
- SHARROCK, J. T. R. & I. J. FERGUSON-LEES 1968. Recent reports. Brit. Birds 61:536—540.
- 1969. Recent reports. Ibid. 62:47—48. VUOLANTO, S. 1969. Mäntysirkku (Emberiza leucocephala) ja tulipäähippiäinen (Regulus ignicapillus) Lemlandin Lågskärillä. (Summary: Pine Bunting (Emberiza leucocephala) and Firecrest (Regulus ignicapillus) seen in Finland.) Ornis Fenn. 46:85—86.

Address of the author: Långvik, Jorvas.