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Bird-markings by the Game Biology Station 1950-65

By

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(*Med et dansk resumé: Vildtbiologisk Stations fuglemærkninger 1950–65*).

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Introduction

As many facets in the biology of a bird species can be investigated through marking, especially when the number of marked and recovered individuals is sizable, ringing and wing-tagging is an important tool for the game biologist trying to investigate the turn-over in bird populations, the movements of migrants throughout the year, etc.

When the game biologists at Kalø started banding in 1949, rings from the Zoological Museum in Copenhagen were used. However, in 1950 special rings and wing-tags were made with the inscription: "Vildtbiol. Station, Kalø pr. Rønde, Danmark".

Number of birds marked and recovered

As will be seen from Table 1, 80 448 birds were ringed and wing-tagged in the period 1950–65, and of these, 11 999 had been recovered by the end of 1965. Of the individuals marked, 79.5% were gallin-

aceous and 15.2% were anserine birds. Of the gallinaceous, most individuals marked were hand-reared, and only among the Pheasants (*Phasianus colchicus*) were there any wild birds. The marked Mallards (*Anas platyrhynchos*) were both wild and hand-reared. The 11 999 recoveries include marked birds that were recaptured, read and let loose again. However, readings in connection with a population analysis at Kalø have not been counted.

Publications.

The Game Biology Station has published most of its marking results in *Danish Review of Game Biology* and *Danske Vildtundersøgelser*. The following papers have appeared:

1) Publications containing lists of birds marked as well as a treatment of the material:

FOG, JØRGEN, 1958: Mærkning af opdrættede grænder 1950–55. Summary: Hand-reared Mallards (*Anas platyrhynchos*) marked during 1950–55. *Danske Vildtundersøgelser* **8**, 32 pp.

- 1964: Dispersal and survival of released Mallards (*Anas platyrhynchos* L.). Resumé: De udsatte gråænders bevægelser og omsætningen i bestanden. Danish Review of Game Biology 4 (3): 1-57.
- 1965: The Mallards from the estate of Kongsdal (dispersal, hunting pressure, survival and productivity). Resumé: Gråænderne på Kongsdal (bevægelser, jagtlig udnyttelse, overlevelse og produktion). Danish Review of Game Biology 4 (3): 61-94.
- PALUDAN, KNUD, 1962: Ederfuglene i de danske farvande. Summary: Eider-ducks (*Somateria mollissima*) in Danish waters. Danske Vildtundersøgelser 10, 87 pp.
- 1965: Grååsens træk og fældningstræk. Summary: Migration and moultmigration of *Anser anser*. Danske Vildtundersøgelser 12, 56 pp.
- 2) Publications treating the material, but without lists of birds marked:
- PALUDAN, KNUD, 1957: Ringmærkning af agerhøns 1950-54. Summary: Partridges ringed during 1950-54. Danske Vildtundersøgelser 7, 27 pp.
- 1958: Some results of marking experiments on Pheasants from a Danish estate (Kalø). Danish Review of Game Biology 3 (3): 167-181.
- 1959: Results of Pheasant markings in Denmark 1949-55. Danish Review of Game Biology 4 (1): 1-23.
- 1963: Partridge markings in Denmark. Danish Review of Game Biology 4 (1): 25-58.

Some aspects of the results of the markings have been published in a popular form in *Dansk Vildtforskning* 1963-64 and 1964-65 (in Danish), where the author also published (in tabular form) the numbers of marked and recovered birds in the respective years.

As will be seen from Table 1, a number of species have been marked in such low numbers that it is improbable that the Game Biology Station will ever acquire a sizable recovery-material. Results of such markings will in the future be published in *Dansk Ornithologisk Forenings Tidsskrift* in connection with the lists published for the markings carried out by the Zoological Museum in Copenhagen.

Rings versus wing-tags.

In the 1950's, the Game Biology Station used a number of wing-tags for Pheasant-

and Partridge-chickens (*Perdix perdix*) and ducklings which were too small to carry a ring at the time of release. The Station has by now practically ceased using these tags. It has been demonstrated (PALUDAN 1963, FOG 1964) that ringing gives a better percent recovery than wing-tagging, even when the birds marked by the two methods are of the same age at the time of release. The reason is probably that wing-tags are often overlooked in dead birds.

Conclusion.

The Game Biology Station (Vildtbiologisk Station), Kalø near Rønde, in the period 1950-65 ringed and wing-tagged 80 448 birds; 11 999 of these had been recovered by the end of 1965. The results of the markings were mainly published in *Danish Review of Game Biology* and *Danske Vildtundersøgelser*, but future publications will also be brought in *Dansk Ornithologisk Forenings Tidsskrift*.

Table 1. Game Biology Station bird markings 1950-65 and number of recoveries reported by the end of 1965.

Tabel 1. Vildtbiologisk Stations mærkninger i perioden 1950-65 og antallet af genmeldinger, der er indlobet indtil udgangen af 1965.

	Nos. marked and recovered 1950-65	
	Antal fugle mærket og genmeldt 1950-65	
	Marked	Recovered
	Mærket	Gemmeldt
<i>Podiceps griseigena</i>	1	0
<i>Ardea cinerea</i>	24	9
<i>Platalea leucorodia</i>	12	2
<i>Anser anser</i>	1,294	395
<i>Branta bernicla</i>	166	37
<i>Tadorna tadorna</i>	72	4
<i>Anas platyrhynchos</i>	8,112	2,055
<i>Anas querquedula</i>	4	0
<i>Anas crecca</i>	1,989	458
<i>Anas acuta</i>	28	5
<i>Anas penelope</i>	25	9

<i>Anas clypeata</i>	10	2	<i>Larus marinus</i>	10	1
<i>Aythya ferina</i>	3	0	<i>Larus ridibundus</i>	35	2
<i>Aythya fuligula</i>	2	2	<i>Rissa tridactyla</i>	14	0
<i>Clangula hyemalis</i>	1	0	<i>Chlidonias niger</i>	19	1
<i>Somateria mollissima</i>	504	128	<i>Sterna hirundo</i>	4	2
<i>Mergus serrator</i>	7	4	<i>Sterna paradisaea</i>	17	0
<i>Pandion haliaetus</i>	1	1	<i>Sterna sandvicensis</i>	17	0
<i>Accipiter gentilis</i>	4	3	<i>Alca torda</i>	1	1
<i>Accipiter nisus</i>	8	0	<i>Columba oenas</i>	3	0
<i>Buteo buteo</i>	16	2	<i>Columba palumbus</i>	101	15
<i>Perdix perdix</i>	23,367	810	<i>Streptopelia decaocto</i>	1	0
<i>Coturnix coturnix</i>	1	0	<i>Athene noctua</i>	3	0
<i>Colinus virginianus</i>	147	12	<i>Strix aluco</i>	5	1
<i>Lophortyx sp.</i>	8	0	<i>Asio otus</i>	1	0
<i>Phasianus colchicus</i>	40,461	7,490	<i>Hirundo rustica</i>	2	0
<i>Gallinula chloropus</i>	46	3	<i>Corvus corone</i>	23	10
<i>Fulica atra</i>	232	15	<i>Corvus frugilegus</i>	1	0
<i>Haematopus ostralegus</i>	168	12	<i>Coloeus monedula</i>	37	9
<i>Vanellus vanellus</i>	17	0	<i>Pica pica</i>	9	6
<i>Squatarola squatarola</i>	36	2	<i>Garrulus glandarius</i>	17	2
<i>Pluvialis apricaria</i>	4	0	<i>Turdus philomelos</i>	1	0
<i>Charadrius hiaticula</i>	12	0	<i>Turdus musicus</i>	9	0
<i>Limosa lapponica</i>	3	0	<i>Turdus merula</i>	25	3
<i>Tringa totanus</i>	3	0	<i>Erithacus rubecula</i>	1	0
<i>Tringa nebularia</i>	2	0	<i>Anthus pratensis</i>	2	0
<i>Tringa ochropus</i>	1	0	<i>Sturnus vulgaris</i>	2	0
<i>Accipiter hypoleucos</i>	6	0	<i>Passer montanus</i>	3	0
<i>Gallinago gallinago</i>	1	0	<i>Chloris chloris</i>	2	0
<i>Scolopax rusticola</i>	6	3	<i>Fringilla coelebs</i>	11	0
<i>Calidris canutus</i>	30	2	<i>Emberiza citrinella</i>	15	0
<i>Calidris alpina</i>	36	0	<i>Plectrophenax nivalis</i>	118	1
<i>Philomachus pugnax</i>	1	0			
<i>Larus camus</i>	44	0	Total: 76 species	80,448	11,999
<i>Larus argentatus</i>	3,024	480	I alt: 76 arter		

DANSK RESUMÉ

Vildtbiologisk Stations fuglemærkninger 1950-65.

I 1950 fik Vildtbiologisk Station, Kalø, fremstillet egne ringe og vingemærker. I årene 1950-65 er der i alt mærket 80.448 fugle, og der er indløbet 11.999 gemeldinger indtil udgangen af 1965. Som det fremgår af tabel 1, er en meget stor procentdel af de mærkede fugle hønsefugle og andefugle (henholdsvis 79,5% og 15,2%).

Resultaterne publiceres i *Danish Review of Game*

Biology og *Danske Vildtundersøgelser*, og desuden indeholder *Dansk Vildtforskning* 1963-64 og 1964-65 småartikler om mærkningsresultaterne. I fremtiden vil mærkningslister for visse arters vedkommende blive offentliggjort i *Dansk Ornithologisk Forenings Tidsskrift* i forbindelse med oversigterne vedrørende Københavns Universitets Zoologiske Museums ringmærkninger.

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