

weer meldingen van het voorkomen van deze opvallende bij. Is het dan zo iets bijzonders? Ik zou willen zeggen: het is een mooie goed kenbare soort, ontegenzeggelijk afkomstig uit meer Zuidelijke streken. Maar een soort die zich in Limburg goed thuis voelt. Hoe lang al? Dat is wel niet meer te achterhalen, omdat het in vroeger jaren aan waarnemers ontbrak. Waar er in Limburg mensen zijn, die zich wat meer gingen interesseren voor de „wilde bijen” kreeg ik ook meldingen en vangsten. Soms al nadat in een enkel gesprek de aandacht op deze bij gevestigd was. Rector Creemers ving ze reeds 30 jaar geleden. Ik zie ze ieder jaar in de tuin van het Groot-Seminarie (Roermond), ze vliegt daar rustig o.a. op appelbloesem. Verder ving ik ze te Odilienberg en Swalmen. Te Heerlen (Br. Arnoud), Echt (Geurts), Posterholt (Mej. H. Dings), Asselt-Swalmen (Mej. T. Vallen), Weert (J. de Haan), enz. Vliegtijd: voorjaar tot late herfst. En verder mag ik verwijzen naar de voortreffelijke artikelen van de heer J. de Haan in dit Maandblad, Jrg. 38, 1948 en Jrg. 41, December 1952.

Roermond, 10 October 1953.

Litt. Wolf H. 1950: in Ent. Zeitschrift Jrg. 60 p. 106-108. Stuttgart. Schmiedeknecht O. 1930: Die Hy-menopteren.....Jena.

THE RESULTS OF BAT-BANDING IN THE NETHERLANDS IN 1952 AND 1953 *

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This paper is intended to be a sequel to the publication: "Fifteen years of Bat Banding in the Netherlands" by L. Bels (1952). As Dr Bels is living now in Singapore, the authors are continuing the investigations on migration and hibernation of dutch bats.

The same methods were used as described by Bels (1952) and the same limestone caves in the southern part of the Netherlands (province Limburg) were searched. However, a serious handicap proved to be the loss of a big cave near the castle "Caestert" (Bels, 1952, p. 11, nr 22) which is rendered unsuitable for the hibernation of bats by the activities

of mushroom-growers. This cave, formerly one of the richest subterranean haunts of these small mammals, in 1952 still contained 106 specimens, but in 1953 yielded only 12.

Nevertheless the total amounts collected in 1952 and 1953 prove to be fairly equal, so probably the loss of hibernation space has not seriously influenced the population of bats in this area and obviously other sites may act as a substitute.

According to table I the numbers of the single species are subject to a certain variation. *Myotis myotis* shows a marked decline (but this may be due to the fact, that the Caestert-cave is no longer suitable for hibernation, as this was one of the principal hibernating places of this species), as do *M. dasycneme*, *M. emarginatus* and *Rhinolophus ferrum equinum*. *Myotis daubentonii*, *M. nattereri*, *Rhin. hipposideros* and *Plecotus auritus* are about constant, whereas *M. mystacinus* shows quite a progress. The percentage of recovery varies between 20 and 40 per cent. *Barbastella barbastellus* is found in small numbers only, so in this case it is impossible to draw a conclusion.

Apart from the limestone caverns in Limburg, bats were recovered and banded in the buildings of 19th century fortresses near Utrecht. The results will be published elsewhere (Sluiter & van Heerdt, 1953, i.p.). Moreover, Messrs. D. C. van Schaïk, G. L. van Eyndhoven and E. Bernard explored a number of caves in S. Limburg during the early spring.

New data on the longevity of bats are available now, as Bels started to band the smaller species in the winter of 1942/43 (see table II). His conclusion is confirmed that even the small species may attain an old age ($10\frac{1}{2}$ — $11\frac{1}{2}$ years) compared with other mammals of the same size.

The foreign returns provide a few interesting points. We made a remarkable discovery on Febr. 26, 1953, finding the remains of approx. 32 individuals of the Common Continental Bat (*Myotis myotis*) in a ventilator of the unused fortress "Vechten" (4 km. from Utrecht). Among the debris, which clearly had been there for a considerable time, one band was found (nr 1498). This band had been applied to a female *M. Myotis*, on July 21, 1939 in the nursing colony at Berlicum (see Bels, 1952,

*) The work in 1953 has been done under a grant from the Netherlands Organization for Pure Research (Z.W.O.).

Table I.

1—7 Jan. 1952.

1—7 Jan. 1953.

Species	Total	♂	♀	Rec.	Perc.	Total	♂	♀	Rec.	Perc.
<i>Barbastella barbastellus</i> . . .	3	3	—	—	—	8	5	3	1	12.5
<i>Eptesicus serotinus</i> . . .	1	—	1	—	—	2	1	1	—	—
<i>Myotis bechsteinii</i> . . .	—	—	—	—	—	1	1	—	—	—
<i>Myotis dasycneme</i> . . .	137	68	69	33	24	111	62	39	22	20
<i>Myotis daubentonii</i> . . .	103	53	50	29	28	107	65	42	36	33
<i>Myotis emarginatus</i> . . .	179	132	47	63	35	144	74	70	56	32
<i>Myotis myotis</i> . . .	92	49	43	16	17	71	40	31	18	25
<i>Myotis mystacinus</i> . . .	186	125	61	61	33	231	142	89	92	40
<i>Myotis nattereri</i> . . .	181	113	69	27	15	196	134	62	47	24
<i>Plecotus auritus</i> . . .	40	23	17	4	10	37	20	17	3	8
<i>Rhin. ferrum equinum</i> . . .	14	9	5	4	29	7	5	2	3	43
<i>Rhin. hipposideros</i> . . .	182	98	83	43	24	186	96	90	39	21

p. 45). Contrary to four specimens (one ♂, 3 ♀♀) also banded at Berlicum, which were recovered 100 km South, hibernating in the limestone caves of S. Limburg, this female took 44 km due North. This matter will be discussed extensively in another paper (Sluiter & van Heerdt, 1953 i.p.).

Another noteworthy recovery consisted of a band, found by a dutch naturalist in the pellet of an owl near Diest (Belgium) on Aug. 5, 1950. This band (nr 13765) had been applied to a Notch-cared Bat (*M. emarginatus*) on Dec. 29, 1945, in a cave of the St. Pietersberg (Slavante nr 13/18), near Maastricht.

A male Rough-legged Bat (*M. dasycneme*) (nr 9064), banded on Dec. 28, 1946, also in the St. Pietersberg (Slavante nr 13/18) and recovered at Oostzaan (8 km North of Amsterdam) on Dec. 2, 1952, covered a distance of 190 km.

The other foreign returns, needing no further discussion, are grouped in table III.

The banding of the small species of bats having been carried on for 11 subsequent years now (except during the winter 1944—1945, when war activities prevented the visit of the caves and the winter 1948—1949 when the absence of Dr Bels and the illness one of the authors made banding impossible), a review of the total numbers of bats collected may reveal interesting facts on the fluctuation of the populations of bats in the caves, which were regularly searched (see table IV).

In the first place we observe a decrease in numbers of *Myotis dasycneme*, *M. emarginatus*, *M. myotis*, *Rhinolophus ferrum equinum* and *Rh. hipposideros* during the years 1943—1948, which seems to come to an end since this latter year. This decline probably should be ascribed to the ever growing activities of Man in the caverns (exploitation of the limestone for production of concrete and mushroom-growing in the caves), compelling the bats to choose other hibernating quarters, which are unknown to us or too dangerous to visit. Perhaps they are scattered all over the country, sleeping in cellars and barns, where they are difficult to recover. The other species, *Myotis daubentonii*, *M. nattereri*, *M. mystacinus* and *Plecotus auritus* remain about constant. The authors have the impression that these 4 species are not so easily disturbed by human influences.

However, the possibility remains, that these fluctuations are influenced by meteorological factors (mild winter, high temperature during the banding periode) or simply represent the normal ups and down of a population (e.g. "ten-year cycle"). A continuation of the bat banding practice may give the solution of this problem.

Reference:

- Bels, L. (1952), Fifteen years of Bat Banding in the Netherlands. Thesis, Utrecht.
Also reprinted from: Publicaties van het Natuurhistorisch Genootschap in Limburg. Reeks V, 1952.

Table II.

Band nr	Species	Sex	Banded	Recovered	Min. age
6929	<i>Barbastella barbastellus</i>	♀	30-XII-1945	4- I-1953	7½
4365	<i>Myotis dasycneme</i>	♂	5- I-1942	5- I-1953	11½
10804	<i>Myotis daubentonii</i>	♂	25-XII-1942	6-III-1953	10½
10744	<i>Myotis emarginatus</i>	♂	25-XII-1942	8- II-1953	10½
10777	" "	♂	25-XII-1942	2- I-1953	10½
11886	" "	♂	29-XII-1942	3- I-1953	10½
10169	<i>Myotis mystacinus</i>	♂	23-XII-1942	3- I-1953	10½
10242	" "	♂	23-XII-1942	7- I-1953	10½
10305	" "	♂	27-XII-1942	4- I-1953	10½
11033	<i>Plecotus auritus</i>	♀	27-XII-1943	7- I-1953	9½
11295	<i>Rhin. hipposideros</i>	♀	30-XII-1942	4- I-1953	10½

Table IV.

Species	'42/'43	'43/'44	'44/'45	'45/'46	'46/'47	'47/'48	'48/'49	'49/'50	'50/'51	'51/'52	'52/'53
<i>Barbastella barbastellus</i>	—	5	—	3	3	3	—	3	8	3	8
<i>Eptesicus serotinus</i>	—	—	—	—	—	—	—	—	2	1	2
<i>Myotis bechsteinii</i>	—	2	—	4	9	1	—	2	4	—	1
<i>Myotis dasycneme</i>	230	172	—	208	170	81	—	86	125	137	111
<i>Myotis daubentonii</i>	121	100	—	138	124	95	—	87	110	103	107
<i>Myotis emarginatus</i>	308	238	—	414	399	245	—	237	287	179	144
<i>Myotis myotis</i>	442	184	—	301	301	94	—	115	153	92	71
<i>Myotis mystacinus</i>	201	149	—	202	140	185	—	213	184	186	231
<i>Myotis nattereri</i>	209	133	—	258	251	201	—	137	163	181	196
<i>Plecotus auritus</i>	25	26	—	27	27	34	—	39	49	40	37
<i>Rhin. ferrum equinum</i>	67	32	—	26	17	10	—	8	14	14	7
<i>Rhin. hipposideros</i>	412	341	—	348	211	167	—	177	225	182	186
Totals	2024	1382	—	1929	1652	1116	—	1110	1324	1118	1116

S a m e n v a t t i n g :

De resultaten van het onderzoek naar de vleermuisbevolking van de Zuidlimburgse grotten gedurende de winters 1951/'52 en 1952/'53, benevens enkele terugmeldingen van buiten het grottengebied worden vermeld.

Bij een vergelijking van de resultaten van vorige ring-excursies, aanvangende in 1942/'43, blijkt, dat het aantal gevangen exemplaren van *Myotis dasycneme*, *M. emarginatus*, *M. myotis*, *Rhinolophus ferrum equinum* en *Rh. hipposideros* aanzienlijk is verminderd, terwijl de vang-

sten van *Myotis daubentonii*, *M. mystacinus*, *M. nattereri* en *Plecotus auritus* ongeveer gelijk zijn gebleven. De auteurs schrijven het afnemen in aantal van de soorten van de eerste groep toe aan de steeds toenemende invloed van de mens in de grotten (champignonkwekers, mergelafgraving). De vertegenwoordigers van de tweede groep zouden voor deze storingen minder gevoelig zijn. De mogelijkheid blijft echter open, dat we hier met een normale schommeling van de populatie te doen hebben.

Utrecht, September 1953.

Table III.

Band nr	Species	Sex	Date banded	Place banded	Cave nr	Date rec.	Place rec.	Dist. km.	Direct.
9064	<i>Myotis dasycneme</i>	♂	28-XII-1946	Maestricht	13/17	2-XII-1952	Oostzaan (N.H.)	190	N.N.W.
13748	<i>Myotis daubentonii</i>	♂	29-XII-1945	"	"	15-IV-1952	Molenbeersel (B.)	38	N.
16358	"	♀	29-XII-1949	"	19	25-X-1952	Herenthals (B.)	73	N.W.
16490	"	♀	30-XII-1949	Heer	44	3-IX-1952	Eindhoven (N.B.)	66	N.N.W.
6960	<i>Myotis emarginatus</i>	♂	30-XII-1945	Cadier & Keer	112	12-IX-1952	Herten (L.)	43	N.N.E.
9804	"	♀	5-I-1952	Pett Lanaye	22	17-X-1952	Meuwen (B.)	34	N.N.W.
10729	"	♀	25-XII-1942	Houthem-	91	20-VIII-1952	Beek (D.)	47	N.E.
	"			St. Gerlach					
10744	"	♂	25-XII-1942	Houthem-	"	6-X-1952	Vlodrop (L.)	34	N.N.E.
	"			St. Gerlach					
12588	"	♂	9-II-1945	Valkenburg	68/72	21-VI-1952	Kolscheid (D.)	18	E.
15765	"	♂	29-XII-1945	Maestricht	13/18	5-VIII-1950	Diest (B.)	49	N.N.W.
14695	"	♂	28-XII-1946	Heer	107	21-X-1951	Baexem (N.B.)	44	N.N.E.
15381	"	♂	29-XII-1946	Valkenburg	68/72	28-X-1951	Orsbeck near Heinsberg (D.)	31	N.E.
	"								
16168	"	♀	29-XII-1949	Maestricht	15	21-V-1952	Oirschot (N.B.)	82	N.W.
16208	"	♂	29-XII-1949	"	"	11-IV-1952	Herenthals (B.)	72	N.W.
17185	"	♂	26-XII-1947	Valkenburg	165	7-X-1951	Zonhoven (B.)	34	N.N.W.
18289	"	♂	4-I-1951	"	57	5-XII-1951	Neeharen (B.)	12	N.N.W.
10020	<i>Myotis mystacinus</i>	♀	29-XII-1947	Maestricht	13/17	27-III-1952	Opitter (B.)	32	N.N.W.
10521	"	♀	29-XII-1942	Heer	44	27-III-1952	"	32	"
13736	"	♀	29-XII-1945	Maestricht	8	27-III-1952	"	32	"
14737	"	♀	28-XII-1947	Cadier & Keer	112	27-III-1952	"	32	"
18825	"	♀	10-I-1952	"	50/51	29-VI-1952	Astenet (B.)	25	S.E.
12507	<i>Rhin. hipposideros</i>	♂	15-XII-1944	Geulvalley	84/87	8-IV-1953	Bree (B.)	34	N.N.W.
13320	"	♂	14-III-1945	Sibbe	57	27-XII-'49	Pt. Lanaye (B.)	10	N.N.W.
17755	"	♂	6-I-1951	Canne	30	28-III-1951	Rekem (B.)	11	N.
18098	"	♂	5-I-1952	"	"	29-IV-1952	Gellik (B.)	7	N.W.
18996	"	♂	6-I-1952	Maestricht	13/18	14-V-1952	Stein (L.)	16	N.

B. = Belgium
D. = Germany
L. = Limburg
N.B. = "Noord-Brabant"
N.H. = "Noord-Holland"

For an explanation of the Cave-numbers
we refer to B e l s, Thesis, Utrecht 1952.