CONTENTS

Abstract

This third contribution summarizes distributional and ecological data on 65 carabid species from the Belgian fauna. Besides distribution maps, results on distribution analyses, time analyses, morphology and ecology of the mentioned species are tabulated.

INTRODUCTION

In the framework of a detailed study on the distribution of Belgian Ground and Tiger beetles, we recently gathered as much data on these beetles as possible and revised all available specimens from collections. In a previous contribution (DESENDER, 1985) a checklist was presented in which 379 species are mentioned for our country.

The following contribution is the third in a series on the detailed distribution and ecology of our carabid beetles. Besides distribution maps and results from our analyses, we also tried to summarize the present knowledge on different morphological and ecological species characteristics. This was based on the literature as well as on own observations. In this way

we hope to make such information more accessible to all interested entomologists and students. Discussion of the results from our analyses has been kept here to a minimum because more general analyses on the entire fauna are more meaningful and will be published in the future. Nomenclature and classification in this paper were used according to our recently published checklist (DESENDER, 1985).

Necessary informations on material and methods are given in detail in our first contribution in this series (DESENDER, 1986a). Summarizing this information, we first dealt with the collection and representativity of the material. After data reduction we obtained on the whole 60.298 different records on the 379 carabid species from our country, divided into 32.196 records before 1950 and 28.102 records from 1950 onwards.
After this, data processing and preparation of the distribution maps was briefly discussed, followed by the methods and sources used in distribution and time analyses. This involved on the one hand comparison of species distribution data with different abiotic and biotic factors for each U.T.M. square (altitude, most important soil type, the presence or absence of chalk in the soil, the presence or absence of acid sands or acid clay, woodland cover and woodland type, the presence of running water with high fall and finally four climatological indices), on the other hand an evaluation of changes in distribution and commonness occurring in the course of time. Furthermore the statistical analyses used were briefly outlined and some comments given on the interpretation of the results. Finally introductory information was presented on the collection and tabulation of morphological and ecological data for each species : data are incorporated on commonness and rarity, total distribution area, mean beetle size, wing developmental type, main reproductive period and habitat preference.

Comments, criticisms or complementary information and new data concerning this paper will be much appreciated.

RESULTS

a) Distribution maps

All distribution maps on species 153-217 are given on p. 12-22. Numerical and taxonomical order as well as nomenclature are according to DESENDER (1985).

The following symbols are used :

○ data before 1950 only

● data after 1950 only

■ data from both time periods

b) Distribution analyses

All results in this respect are summarized and explained in Table I.

c) Morphology and ecology of the species

Table II. summarizes these results. Data on wing dimorphism only apply to the mentioned species. Wing development in several species was not yet mentioned in literature (a.o. the constantly brachypterous species Pterostichus aethiops and P. ovoideus and the constantly macropterous species Agonum nigrum, A. scitulum and A. viduum). Stomis pumicatus is known as wing dimorphic but until now we only encountered brachypterous individuals in Belgium (on 60 individuals). Pterostichus strenuus and P. vernalis are mostly mentioned as dimorphic species but are better characterized as polymorphic. The same holds true for Pterostichus nigrita, mostly mentioned as being macropterous. Agonum moestum and Synuchus nivalis are mostly called wing dimorphic but according to our results seem to be exclusively macropterous. Calathus fuscipes shows wing dimorphism and was previously only known as brachypterous. Calathus mollis finally was previously mentioned as dimorphic

but is constantly macropterous. This is due to the fact that only recently the wing dimorphic Calathus erythroderus has been defined as a true species, where it was previously considered a subspecies of Calathus mollis (pers. comm. B. AUKEMA).

SPECIES	macropterous individuals	brachypterous individuals	total number of individuals checked
Pterostichus anthracinus	9	391	400
Pterostichus diligens	110	1323	1433
Pterostichus lepidus	16	1349	1365
Pterostichus melanarius	36	8415	8451
Pterostichus minor	235	240	475
Pterostichus strenuus	916	5320	6236
Calathus erratus	8	2517	2525
Calathus erythroderus	8	201	209
Calathus fuscipes	16	1317	1333
Calathus melanocephalus	89	5455	5544
Calathus piceus	78	1089	1167
Olisthopus rotundatus	7	136	143
Agonum fuliginosum	381	1099	1480
Agonum obscurum	29	1056	1085

d) Time analysis

These results are also mentioned in Table II : from this list 23 species show a relative decrease against 17 which relatively increased during recent decades. As mentioned earlier (DESENDER, 1986 a,b) more species are relatively decreasing which means that such species are less common and thus have become even more rare or extinct in recent decades. The difference is not so pronounced in this species list because a relatively high number of very common species are included. More general results on a time analysis for all species will be given in the future (DESENDER, in prep.).

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Special acknowledgements are also due to the very many collectors who contributed by means of sending their data and/or allowing us to identify or check the carabids from their collection : M. Baguette, G. Boosten, Dr. R. Bosmans, S. Brinckman, H. Brousmiche-Willocx, G. Coulon, R. Dall'asta, Cpt. Deledicque, E. Derenne (!), M. Detollenaere, R. Eben, R. Goossens, Dr. C. Grégoire-Wibo, G. Haghebaert, N. Huart, L. Hubert, P. Lays, G. Lhost, B. Libbrecht, Dr. M. Loreau, J. Menten, R. Pletinck, M. Pollet, M. Poelman, P. Poot, B. Renson, J. Robben, M. Rouard, P. Schoolmeesters, C. Segers, E. Taveirne, J. Tavernier, W. Troukens, Prof. I. Van Boven, R. Van Den Heuvel, K. Van Keer, G. Van Maldegem, R. Vannieuwenhuyse, J. Van Stalle, F. Verbeelen, Ch. Verbeke, L. Verlinden, K. Verstraeten.

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The final preparation of the maps was done with great care by my mother, whom I am therefore much indebted.

T. Van Gijzen kindly checked our identifications from difficult and/or new species from our country.

Finally we are especially grateful to Prof. Dr. J. Hublé for his continuous support and interest during our study, as well as to Dr. J. Van Goethem for proposing the publication of these contributions in the 'Koninklijk Belgisch Instituut voor Natuurwetenschappen' and to Dr. P. Grootaert for revision of the manuscript.

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Nr	Species	1	2	3	4	5	6	7	8	9	10	11	12
153	*Stomis pumicatus*	113	1	L+ZL						3	3		2
154	*Pterostichus aethiops*	429	-1	SL			2			-3	-4	-5	-3
155	*Pterostichus angustatus*	179		FZ		*	2	3			-4		
156	*Pterostichus anthracinus*	113		L+ZL							3	1	2
157	*Pterostichus aterrimus*	66	3	FZ							2		
158	*Pterostichus cristatus*	287	-3	SL	*		2	5		-2	-2	-3	-3
159	*Pterostichus cupreus*	131											
160	*Pterostichus diligens*	141											2
161	*Pterostichus gracilis*	87	4							2	3	2	2
162	*Pterostichus kugelanni*	193	-4	AL							-2	-1	-1
163	*Pterostichus lepidus*	138		FZ		*							
164	*Pterostichus longicollis*	149			*					1			
165	*Pterostichus macer*	117		MC	*						1		1
166	*Pterostichus madidus*	242	-3	SL	*		2	5		-3	-2	-3	-3
167	*Pterostichus melanarius*	158											
168	*Pterostichus minor*	118	4	Z+ZL							2	2	2
169	*Pterostichus niger*	157		Z+ZL		*					2		
170	*Pterostichus nigrita*	157											
171	*Pterostichus oblongopunctatus*	205	-3	SL		*	2	5		-2	-2	-3	-2
172	*Pterostichus ovoideus*	233	-3	SL	*					-2	-2	-3	-2
173	*Pterostichus punctulatus*	148		L+ZL									
174	*Pterostichus strenuus*	155											2
175	*Pterostichus vernalis*	135								2		2	2
176	*Pterostichus versicolor*	176				*				-2	-1		
177	*Abax carinatus*	297	-3	SL			2			-4	-3	-3	-3
178	*Abax ovalis*	284	-3	SL	*		3	2		-2	-2	-3	-3
179	*Abax parallelepipedus*	210	-3	AL	*		2			-2	-2	-2	-3
180	*Abax parallelus*	269	-3	SL	*		2	5		-2	-2	-3	-3
181	*Molops piceus*	242	-3	SL	*		2	5		-2	-2	-3	-2
182	*Calathus ambiguus*	135										2	
183	*Calathus erratus*	111	4	Z+ZL							3	3	3
184	*Calathus erythroderus*	97	3	Z+ZL							2	2	3
185	*Calathus fuscipes*	138											
186	*Calathus melanocephalus*	121	3	Z+ZL							3	4	3
187	*Calathus micropterus*	172	-4	Z+ZL			2					-1	-2
188	*Calathus mollis*	31	2	DZ	*					3	1	4	1
189	*Calathus piceus*	69	3	FZ						2	3	3	3
190	*Sphodrus leucophthalmus*	165			*								-2
191	*Pristonychus terricola*	117	3								3	2	3
192	*Synuchus nivalis*	135											
193	*Olisthopus rotundatus*	185								-3			
194	*Agonum assimile*	179		SL		*	1						
195	*Agonum dolens*	19											
196	*Agonum dorsale*	131	1	L+ZL						2	3	6	2
197	*Agonum ericeti*	502	-1	SL			2			-3	-4	-6	-3
198	*Agonum fuliginosum*	145											
199	*Agonum gracile*	120	3	Z+ZL							2	2	2
200	*Agonum gracilipes*	162											
201	*Agonum livens*	101	2	L+ZL									
202	*Agonum lugens*	31											
203	*Agonum marginatum*	96								2	2	2	2
204	*Agonum micans*	199	-3	SL			2	5		-3	-2	-4	-3
205	*Agonum moestum*	138											2
206	*Agonum muelleri*	157		AL									
207	*Agonum nigrum*	89	2	L+ZL						2		2	2
208	*Agonum obscurum*	96	3	Z+ZL						2	2	5	4
209	*Agonum piceum*	112											
210	*Agonum ruficorne*	163		AL									
211	*Agonum scitulum*	226	-3	SL			2			-3		-3	-3
212	*Agonum sexpunctatum*	134		Z+ZL		*	1						
213	*Agonum thoreyi*	73	3	Z+ZL						2	2	2	3
214	*Agonum versutum*	69	3	Z+ZL						3	3	3	3
215	*Agonum viduum*	155											
216	*Agonum viridicupreum*	169	-4	AL									
217	*Perigona nigriceps*	278	-2	CC						-2		-4	-4

TABLE I. Results from distribution analyses based on the presence/absence data per U.T.M. 10 km square.

---

1 : mean altitude for each species

2 : significant results after comparison of cumulative altitudinal classes with species distribution :
1 = significantly more occurring below 400 m;
-1 = idem above 400 m
2, 3, 4 = idem below respectively 300 m, 200 m, 50 m;
-2, -3, -4 = idem above respectively 300 m, 200 m, 50 m

3 : significant reactions to most important soil type per U.T.M. square :
MC = maritime clay, DZ = dune sand, FZ = fine sand and gravel, Z = DZ+FZ
ZL = sand-loam mixtures, L = loam, SL = stony loam, AL = all loam mixtures, CC = clay on chalk

4 : species significantly more occurring in U.T.M. squares with chalk in the soil (mostly species which are more or less thermophilic)

5 : species significantly more occurring in U.T.M. squares with acid sands or acid clay (mainly species from oligotrophic situations)

6 : significant results after comparison with cumulative classes of woodland cover :
1, 2, 3 = more than respectively 1 %, 20 % or 40 % of woodland cover

7 : significant positive reactions to most important woodland type :
1 = oak, 2 = beech, 3 = coniferous trees, 5 = deciduous trees

8 : species significantly more occurring in U.T.M. squares with rivers or rivulets with more than 50 m fall per km.

9 : significant reactions to annual precipitation cumulative classes :
1, 2, 3 = less than respectively 700, 800 or 900 mm precipitation
-2, -3, -4 = more than respectively 800, 900 or 1000 mm precipitation

10 : significant reactions to relative aridity index cumulative classes :
1, 2, 3 = less than respectively 35, 40 or 45 of index value
-1, -2, -3, -4 = more than respectively 35, 40, 45 or 50 of index value

11 : significant reactions with the first day each year a minimal temperature of 5°C is reached (in cumulative classes) :
1, 2, 3, 4, 5, 6 = respectively before 5, 10, 15, 20, 25 or 30 March
-1, -2, -3, -4, -5, -6 = respectively after 5, 10, 15, 20, 25 or 30 March

12 : significant reactions to annual number of days with frost :
1, 2, 3, 4 = less than respectively 55, 65, 75 or 85 days
-1, -2, -3, -4 = more than respectively 55, 65, 75 or 85 days.

Nr	Species	1	2	3	4	5	6	7	8	9	10
153	*Stomis pumicatus*	109	226	S	C		c	7.4	b-d	F	6,13
154	*Pterostichus aethiops*	7	13	D	B		m	13.2	b	F	5
155	*Pterostichus angustatus*	41	72	S	E		c	9.5	m	F	8,5
156	*Pterostichus anthracinus*	97	189	D	C		c	10.8	d	F	2
157	*Pterostichus aterrimus*	10	32	D	A		c	13.5	m	F	3
158	*Pterostichus cristatus*	104	279	S	A		m	14.5	b	H	6
159	*Pterostichus cupreus*	171	561	DD	A		c	11.0	m	F	20
160	*Pterostichus diligens*	151	402	I	A		c	5.3	d	F	20,10
161	*Pterostichus gracilis*	36	75	D	A		c	9.2	m	F	2
162	*Pterostichus kugelanni*	28	72	DD	C		c	13.0	m	F	
163	*Pterostichus lepidus*	102	250	DD	A		c	11.5	d	H	8,15
164	*Pterostichus longicollis*	13	16	DD	B		c	6.5	m	F	
165	*Pterostichus macer*	18	34	S	A		c	13.5	m	F	1,18
166	*Pterostichus madidus*	166	533	II	B		r	15.5	b	H	6,19
167	*Pterostichus melanarius*	220	666	S	A		c	15.0	d	H	19
168	*Pterostichus minor*	149	376	II	A		c	7.2	d-p	F	20,10
169	*Pterostichus niger*	152	413	II	A		c	18.0	m	H	6,20
170	*Pterostichus nigrita*	189	537	I	A		c	10.3	p	F	20
171	*Pterostichus oblongopunctatus*	169	518	I	A		c	10.5	m	F	6
172	*Pterostichus ovoideus*	35	65	DD	B		m	6.8	b	F	18
173	*Pterostichus punctulatus*	15	29	DD	A		r	13.0	m	F	15
174	*Pterostichus strenuus*	237	770	II	A		c	6.0	p	F	19,20
175	*Pterostichus vernalis*	225	707	D	A		c	6.7	p	F	20
176	*Pterostichus versicolor*	188	594	II	A		c	10.0	m	F	19
177	*Abax carinatus*	9	21	DD	B		m	15.5	b	HF	5
178	*Abax ovalis*	71	158	S	B		m	13.0	b	FH	5
179	*Abax parallelepipedus*	187	605	II	B		c	18.5	b	HF	6
180	*Abax parallelus*	94	195	S	B		m	15.0	b	FH	5
181	*Molops piceus*	77	150	D	A		m	11.5	b	F	5
182	*Calathus ambiguus*	72	178	DD	A		c	10.5	m	H	14
183	*Calathus erratus*	117	417	DD	A		c	10.3	d	H	15,19
184	*Calathus erythroderus*	48	134	DD	A		c	7.5	d	H	
185	*Calathus fuscipes*	181	588	S	C		c	11.5	d	H	19
186	*Calathus melanocephalus*	159	439	S	A		c	7.5	d	H	19
187	*Calathus micropterus*	25	43	S	A		r	7.5	b	H	5
188	*Calathus mollis*	23	84	S	C		c	7.5	m	H	16
189	*Calathus piceus*	64	141	S	B		c	10.0	d	H	5
190	*Sphodrus leucophthalmus*	20	35	D	C		c	22.0	m	H	22
191	*Pristonychus terricola*	38	80	D	G		c	14.0	b	H	22
192	*Synuchus nivalis*	90	155	S	A		c	7.5	m	H	14
193	*Olisthopus rotundatus*	71	134	DD	C		c	6.6	d	H	8,15
194	*Agonum assimile*	184	517	II	A		c	11.0	m	F	6
195	*Agonum dolens*	1	1		A		m	6.5	m	F	3
196	*Agonum dorsale*	234	888	II	A		c	6.7	m	F	19,12
197	*Agonum ericeti*	7	29	S	A		m	7.5	b	F	11
198	*Agonum fuliginosum*	185	487	II	A		c	6.5	d-p	F	20,7
199	*Agonum gracile*	48	77	S	A		c	6.5	m	F	11,10
200	*Agonum gracilipes*	7	7		A		r	7.8	m	F	
201	*Agonum livens*	33	79	D	A		c	9.0	m	F	13
202	*Agonum lugens*	3	3		E		c	8.8	m	F	2
203	*Agonum marginatum*	125	300	I	C		c	9.5	m	F	3
204	*Agonum micans*	66	128	S	A		c	6.9	m	F	4,2
205	*Agonum moestum*	164	481	S	A		c	8.8	m	F	2
206	*Agonum muelleri*	217	796	I	A		c	8.0	m	F	19
207	*Agonum nigrum*	35	55	S			c	7.5	m	F	13
208	*Agonum obscurum*	160	417	II	F		c	5.4	d	FH	20
209	*Agonum piceum*	22	44	D	A		c	6.3	m	F	2
210	*Agonum ruficorne*	208	570	II	G		c	8.0	m	F	2,4
211	*Agonum scitulum*	22	30	S	B		c	6.8	m	F	2,4
212	*Agonum sexpunctatum*	137	340	DD	A		c	8.3	m	F	15
213	*Agonum thoreyi*	95	213	II	A		c	7.2	m	F	10,2
214	*Agonum versutum*	27	43	DD	A		c	7.8	m	F	3
215	*Agonum viduum*	138	274	S	A		c	8.0	m	F	2
216	*Agonum viridicupreum*	35	61	S	A		m	9.0	m	F	13
217	*Perigona nigriceps*	11	15	S	B		m	2.8	m	F	

Table II. Commonness and rarity, recent relative increase or decrease, total distribution area, mean beetle size, wing developmental type, main reproductive period and habitat preference.

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1 : number of different U.T.M. 10 km squares with the species

2 : number of records (locality/year data) per species

3 : recent relative increase , decrease or stagnation of the species in our country since 1950 :
D = significantly decreasing (based on the number of records)
DD = significantly decreasing (based on the number of records as well as based on the number of U.T.M. squares with the species)
I = idem as D but increasing
II = idem as DD but increasing
S = stagnation although there are anough data to allow statistical analysis

4 : total distribution area :
A = palearctic, B = entirely european, C = western palearctic, D = euro-mediterranean, E = euro-caucasian, F = circumpolar, G = amphi-atlantic

5 : species with a coastal distribution pattern

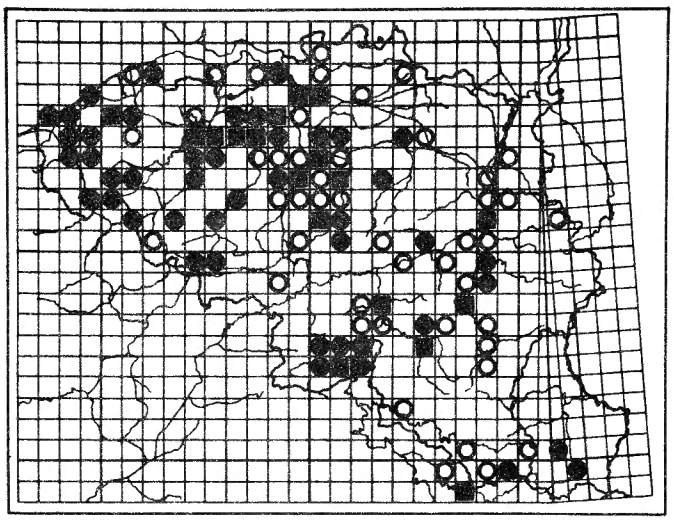
6 : position of Belgium in the total distribution area :
c = central, r = near limits (but distribution limit not across Belgium, m = marginal (distribution limit across Belgium)

7 : mean beetle size in mm

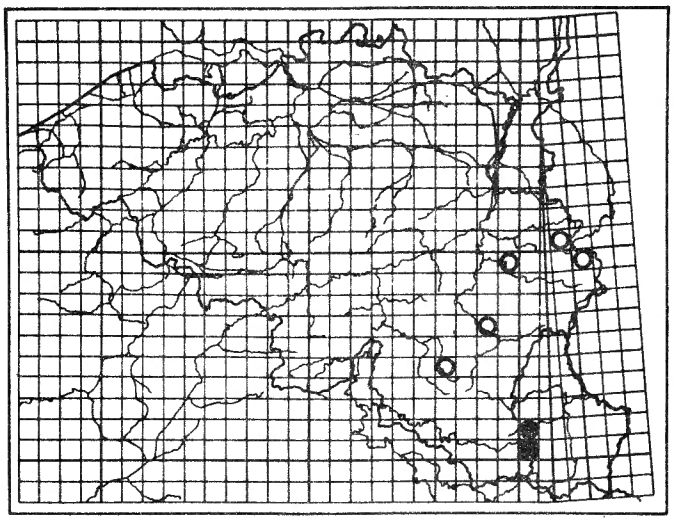
8 : wing developmental type in our country :
m = constantly macropterous, b = constantly brachypterous, d = wing dimorphic and p = wing polymorphic species; if two codes are given the first always refers to our own observations (material from our country), whereas the second refers to the literature

9 : main reproductive period :
F = during Spring, H = during Summer-Autumn, FH = mainly during Spring, HF = mainly during Autumn

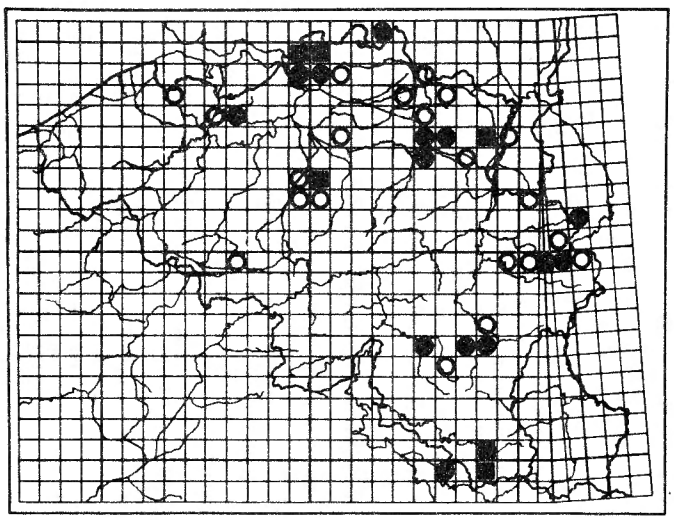
10 : Habitat preference codes : species known mainly to occur in :
1 (salt marshes), 2 (eutrophic riparian habitats), 3 (oligotrophic riparian habitats), 4 (river banks near running water), 5 (woodland, stenotopic), 6 (woodland, eurytopic), 7 (meadow forests), 8 (dry heathland), 9 (wet heathland), 10 (marshland), 11 (bogs), 12 (ruderal habitats and cultivated fields), 13 (wet grasslands), 14 (dry grasslands), 15 (different habitats on dry sandy soil), 16 (dry dune habitats), 17 (beaches and dune slacks), 18 (stony slopes and chalk grasslands), 19 (different dry habitats, eurytopic), 20 (different humid habitats, eurytopic), 21 (living on trees), 22 (caves, cellars).



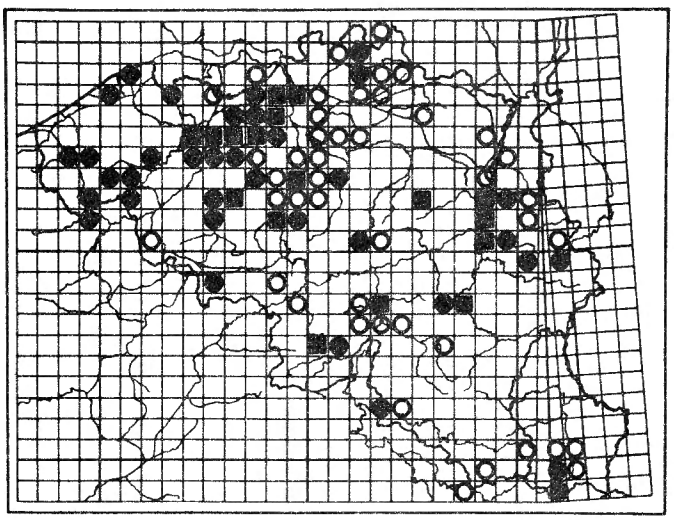
153. STOMIS pumicatus



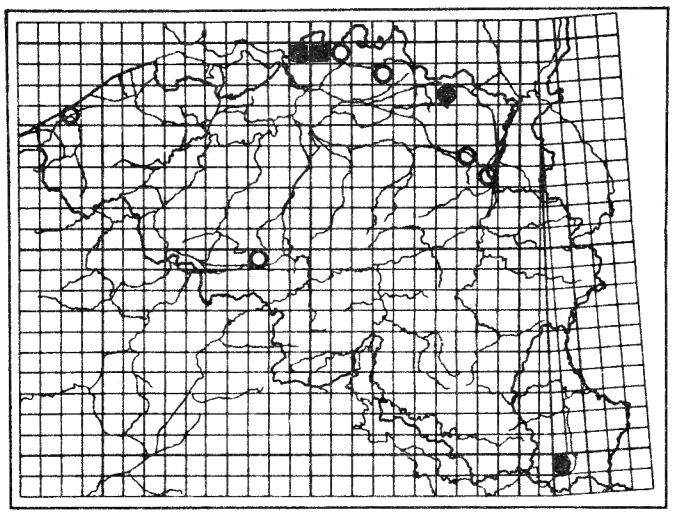
154. PTEROSTICHUS aethiops



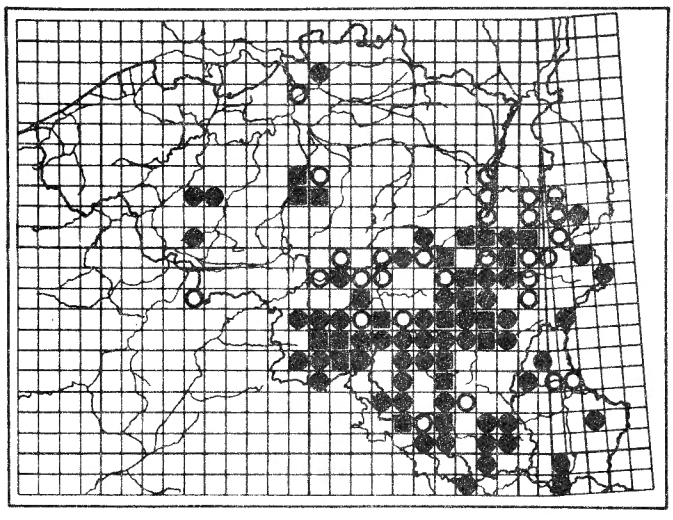
155. PTEROSTICHUS angustatus



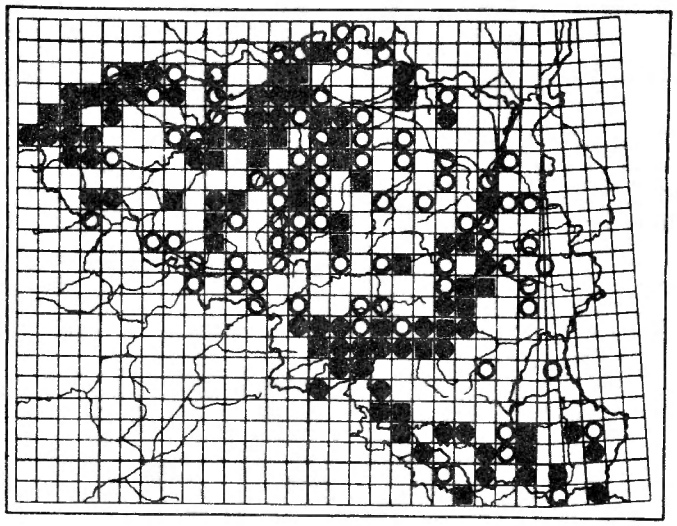
156. PTEROSTICHUS anthracinus



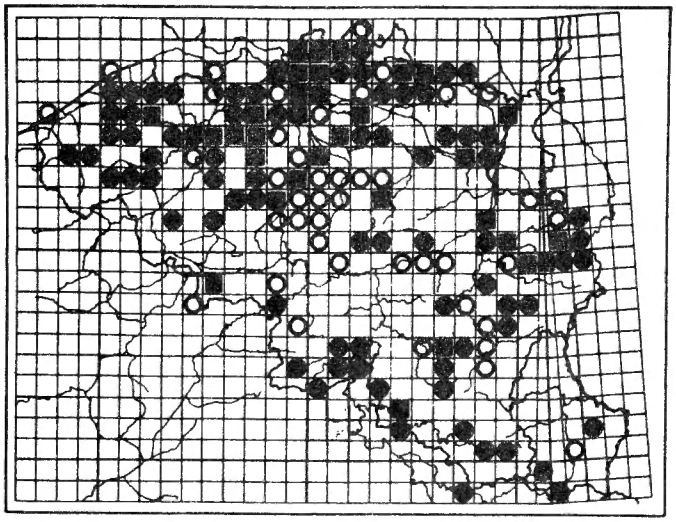
157. PTEROSTICHUS aterrimus



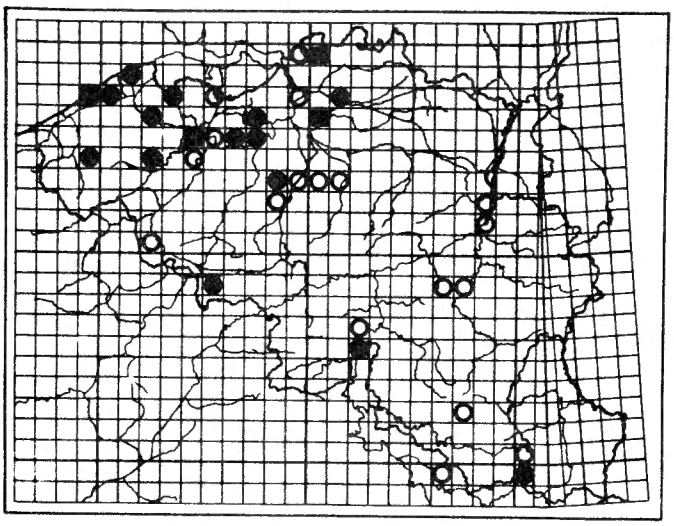
158. PTEROSTICHUS cristatus



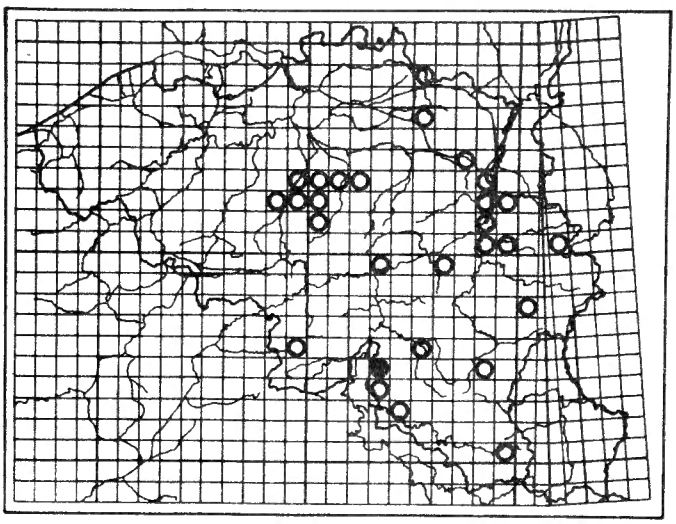
159. PTEROSTICHUS cupreus



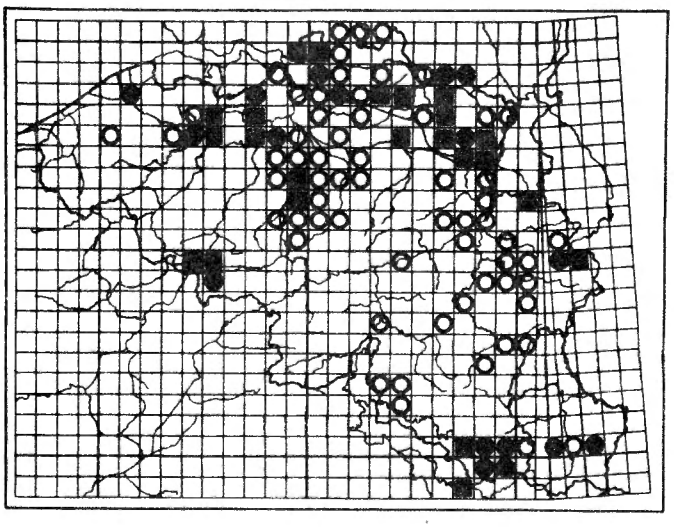
160. PTEROSTICHUS diligens



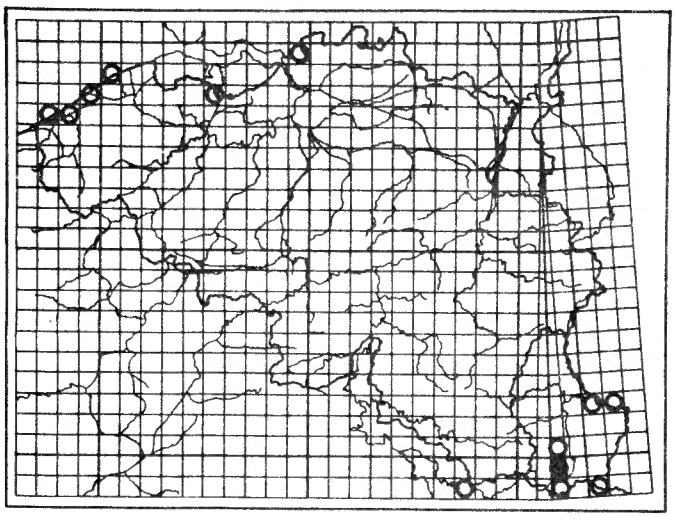
161. PTEROSTICHUS gracilis



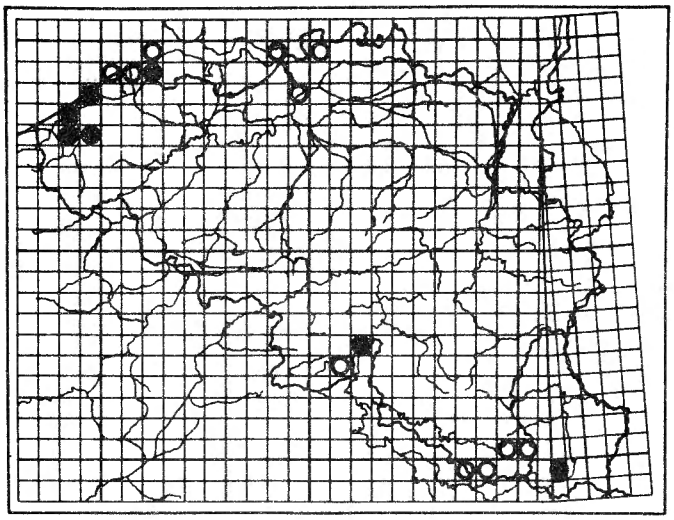
162. PTEROSTICHUS kugelanni



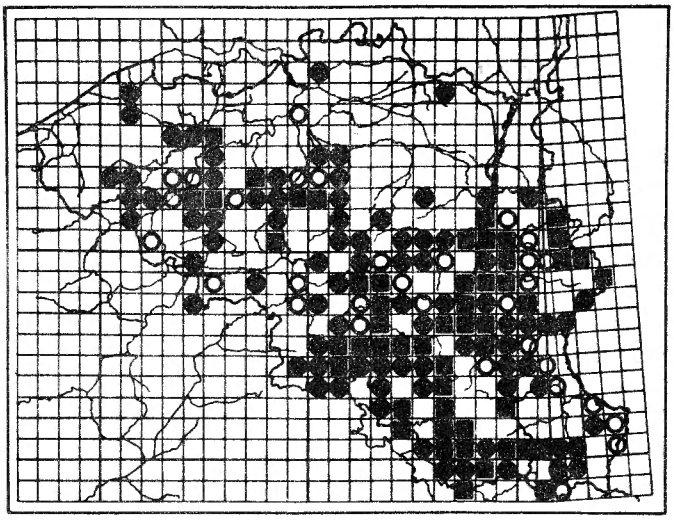
163. PTEROSTICHUS lepidus



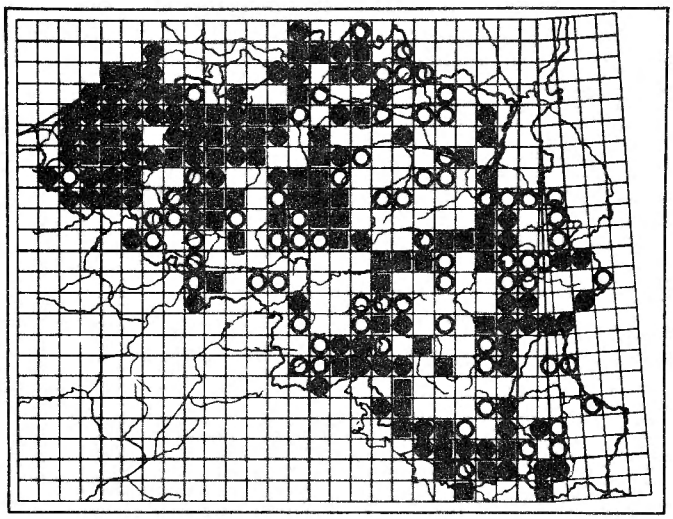
164. PTEROSTICHUS longicollis



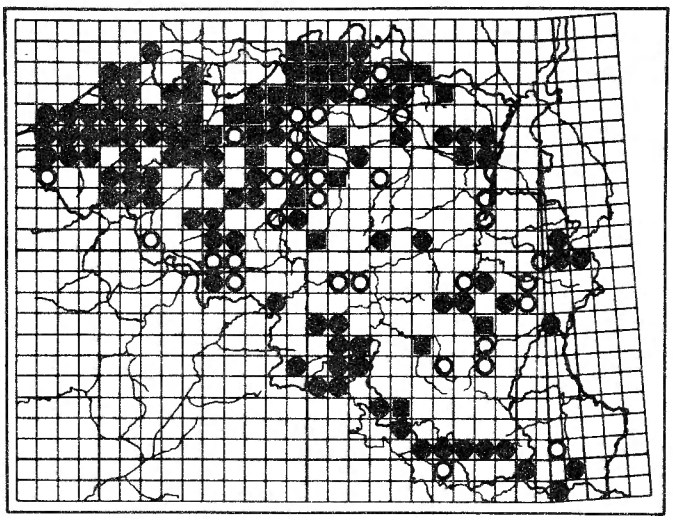
165. PTEROSTICHUS macer



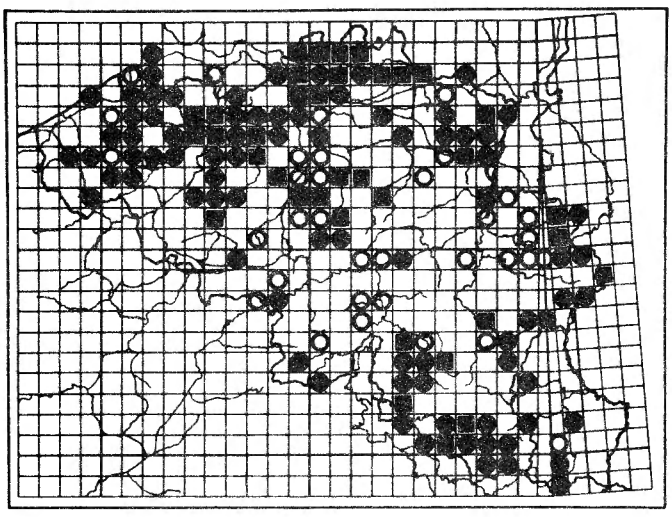
166. PTEROSTICHUS madidus



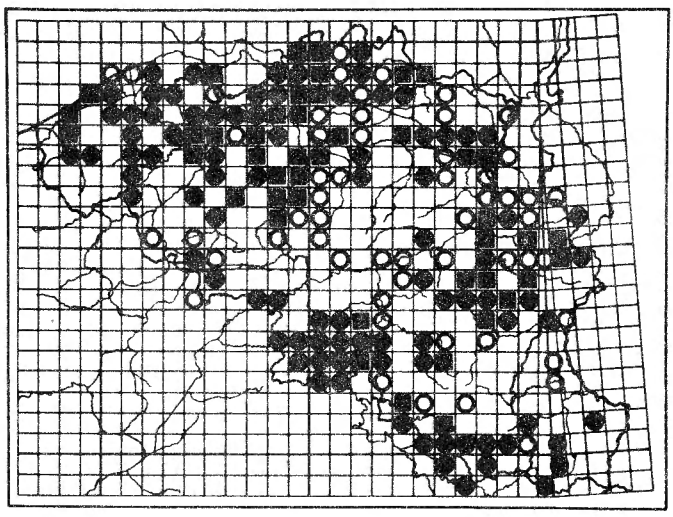
167. PTEROSTICHUS melanarius



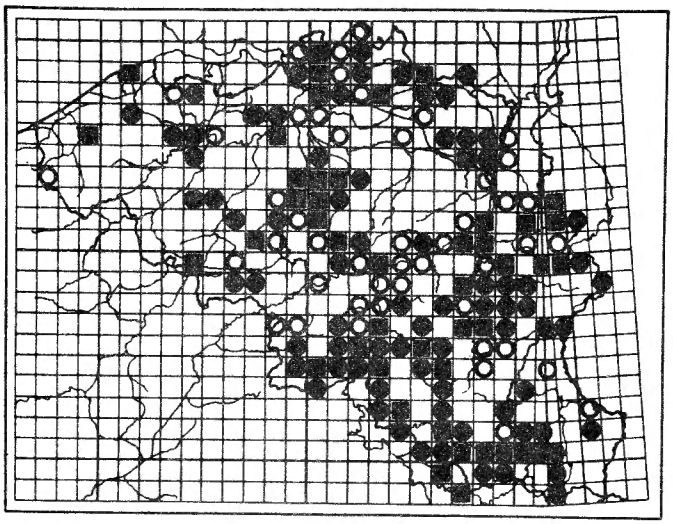
168. PTEROSTICHUS minor



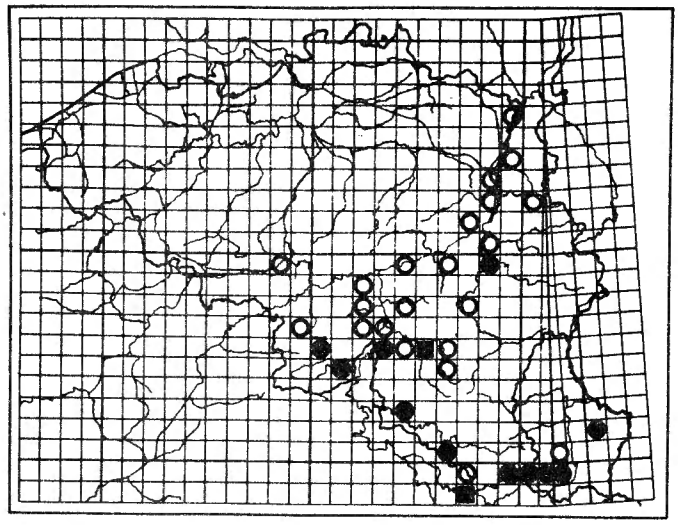
169. PTEROSTICHUS niger



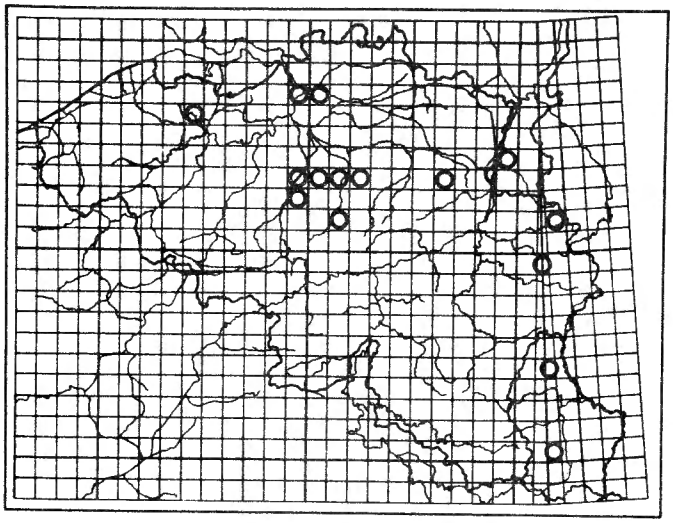
170. PTEROSTICHUS nigrita



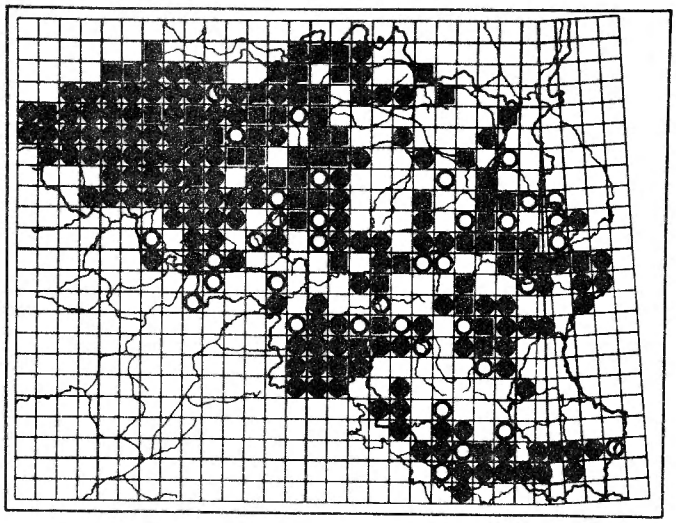
171. *PTEROSTICHUS oblongopunctatus*



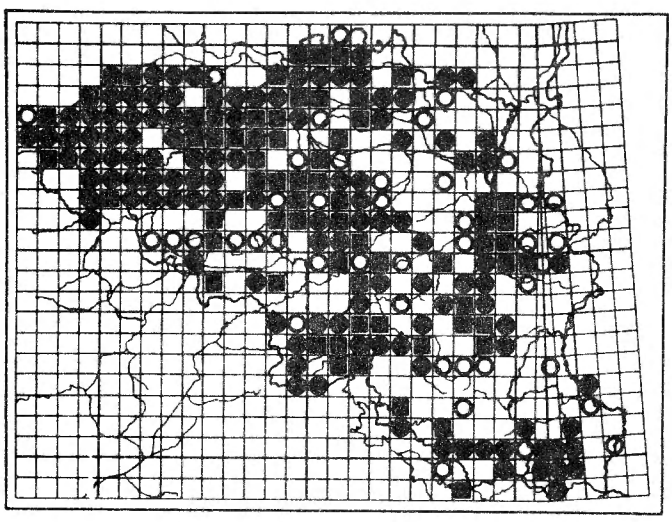
172. *PTEROSTICHUS ovoïdeus*



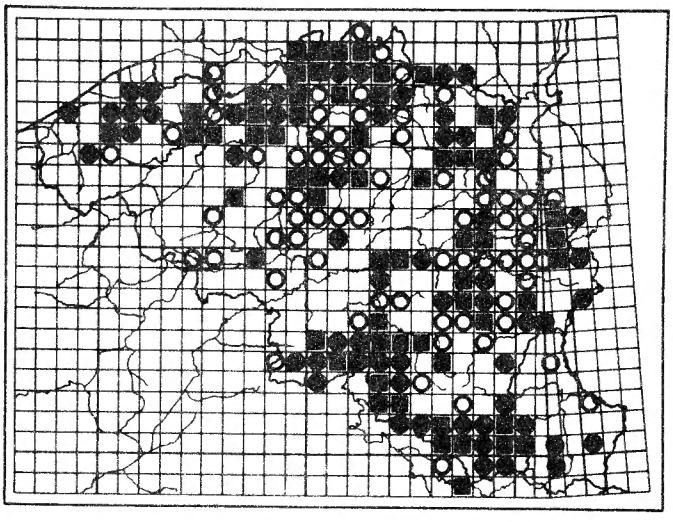
173. *PTEROSTICHUS punctulatus*



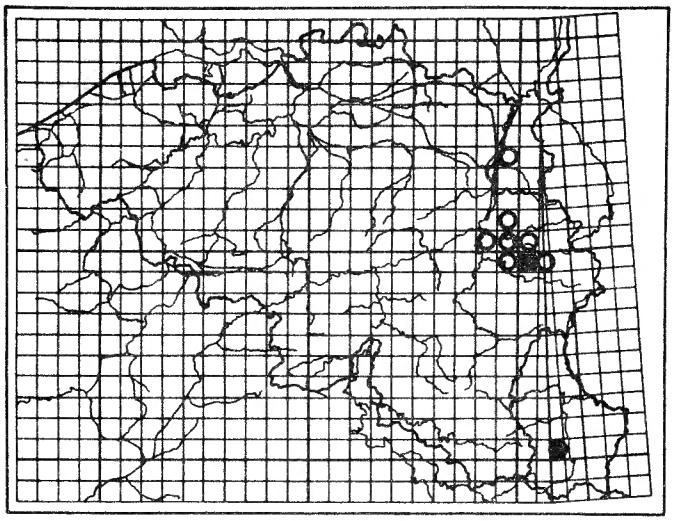
174. *PTEROSTICHUS strenuus*



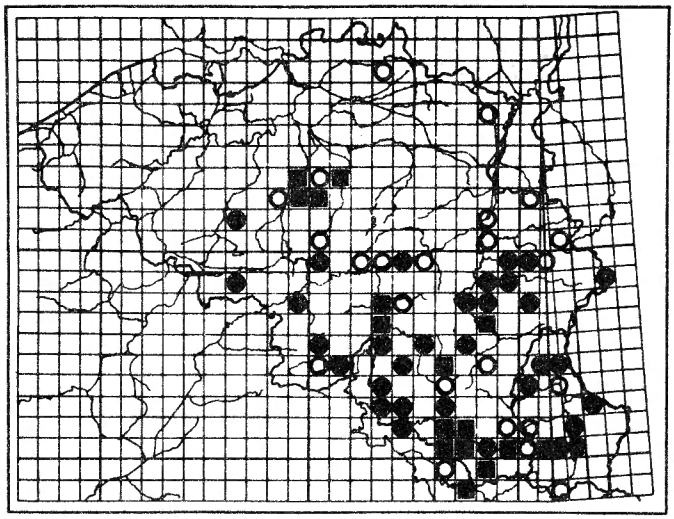
175. *PTEROSTICHUS vernalis*



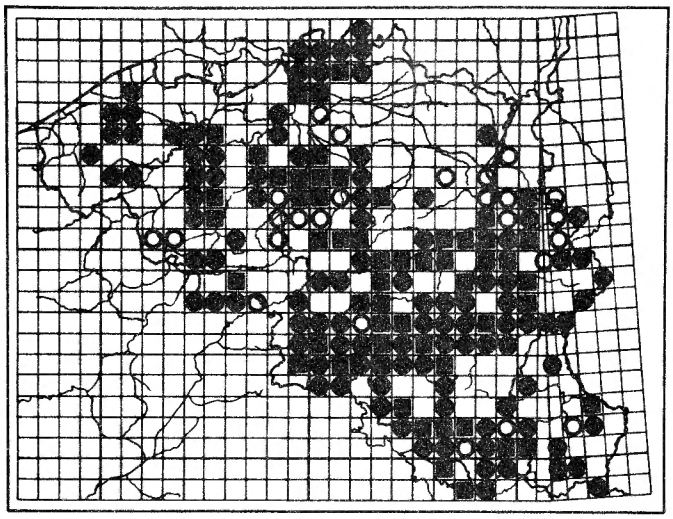
176. *PTEROSTICHUS versicolor*



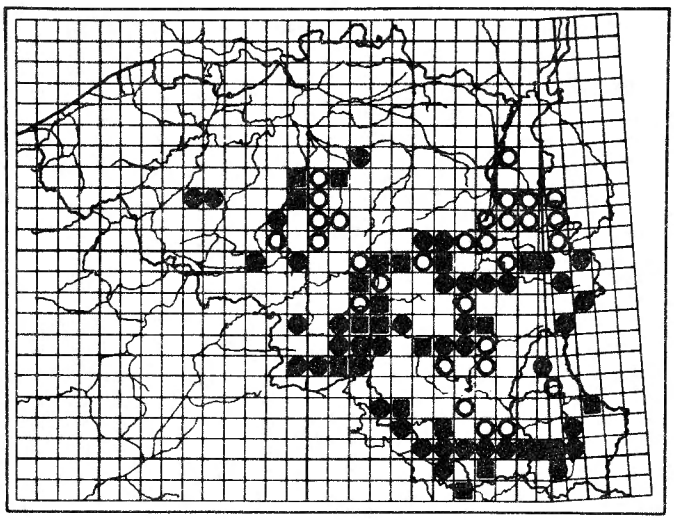
177. *ABAX carinatus*



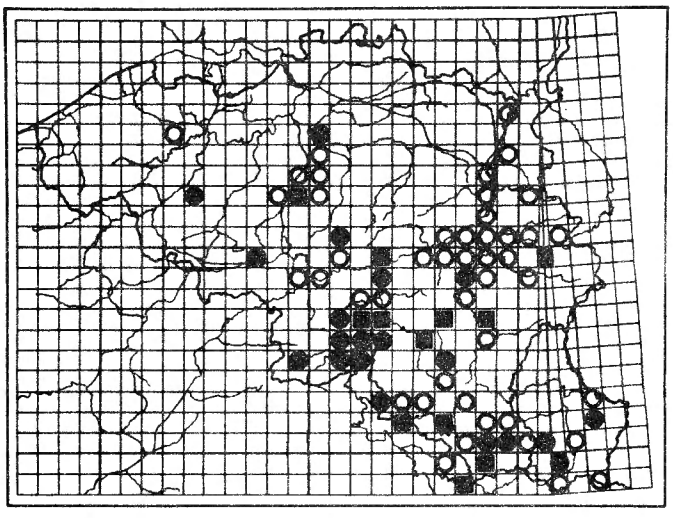
178. *ABAX ovalis*



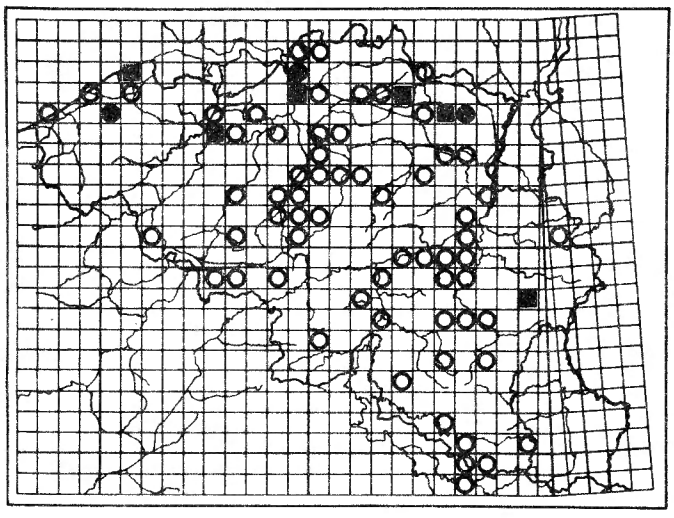
179. *ABAX parallelepipedus*



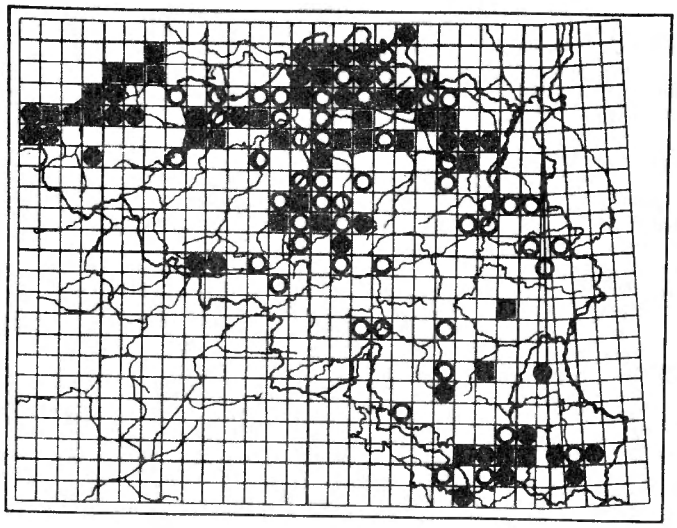
180. *ABAX parallelus*



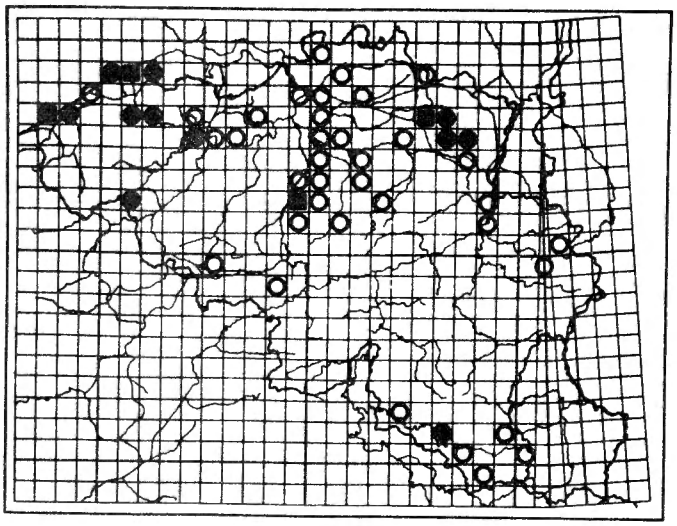
181. *MOLOPS piceus*



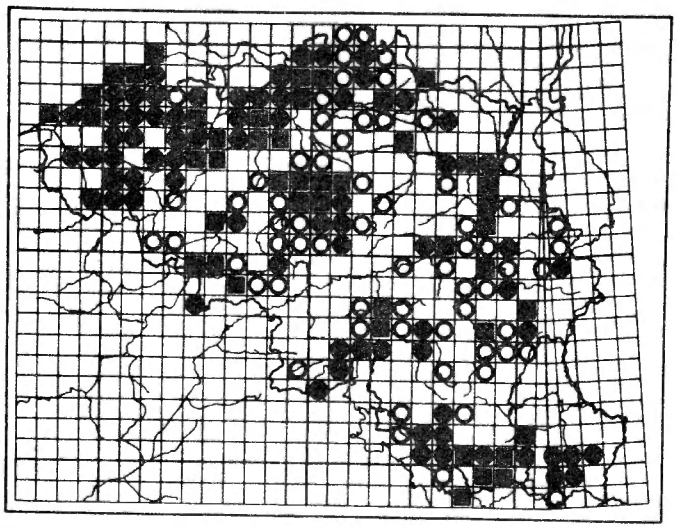
182. *CALATHUS ambiguus*



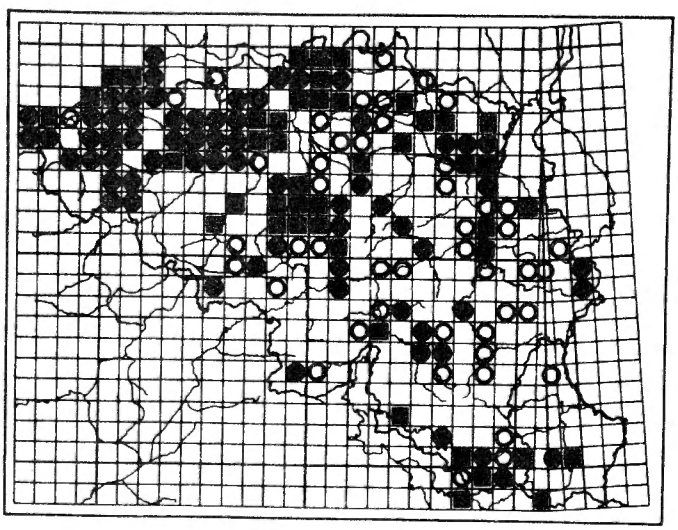
183. *CALATHUS erratus*



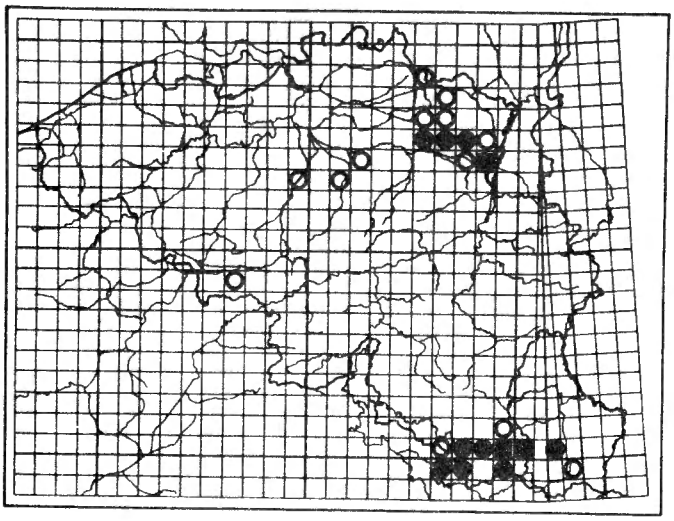
184. *CALATHUS erythroderus*



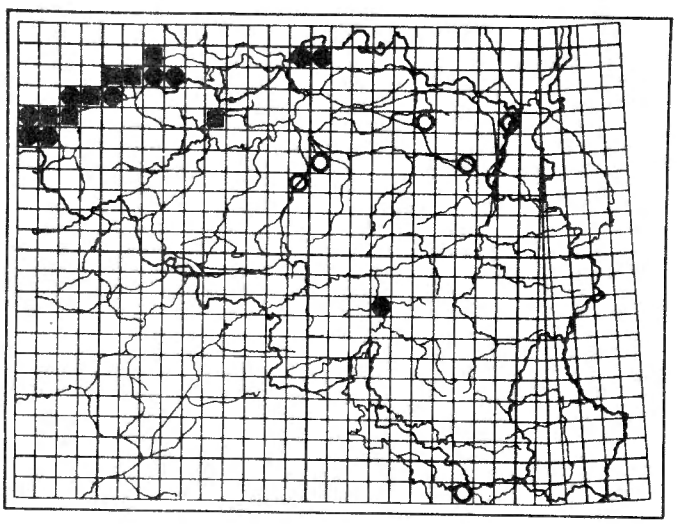
185. *CALATHUS fuscipes*



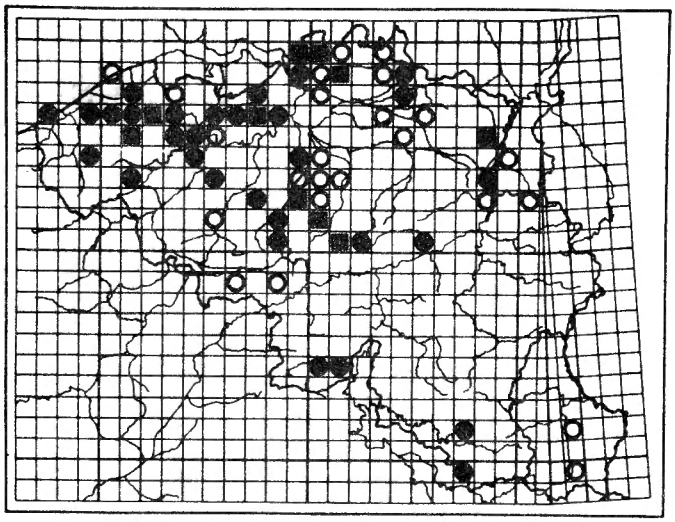
186. *CALATHUS melanocephalus*



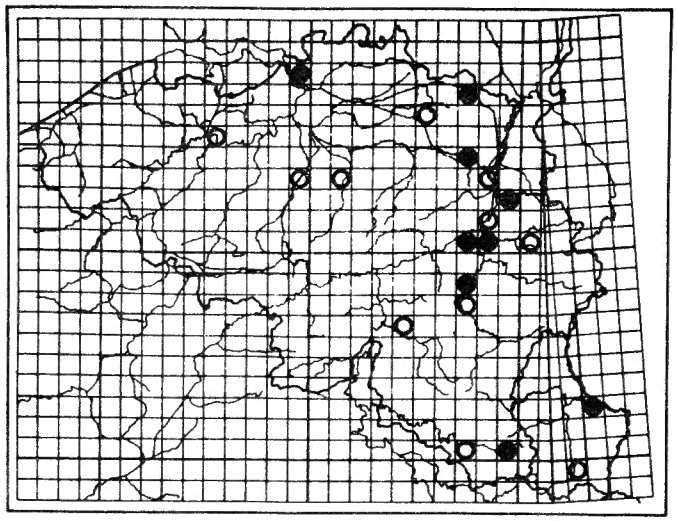
187. *CALATHUS micropterus*



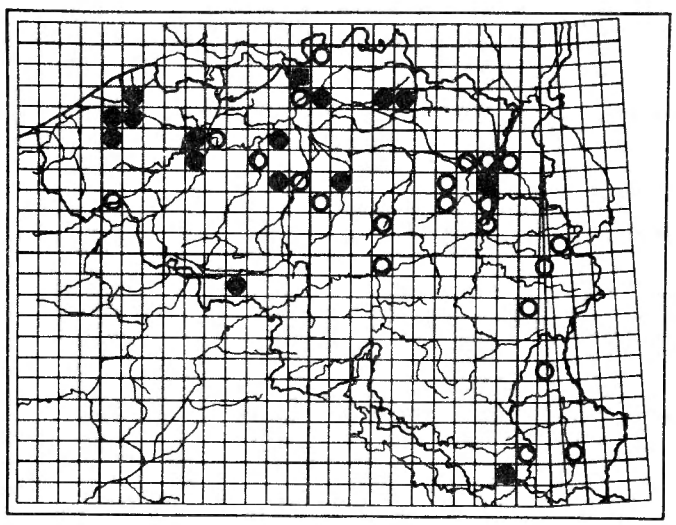
188. *CALATHUS mollis*



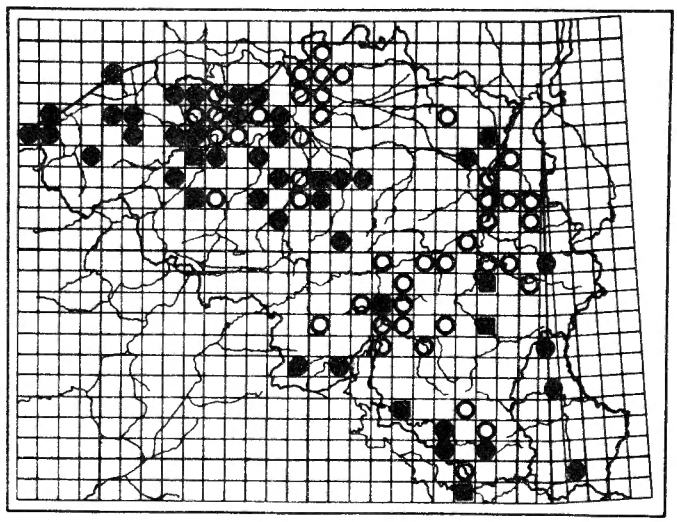
189. CALATHUS piceus



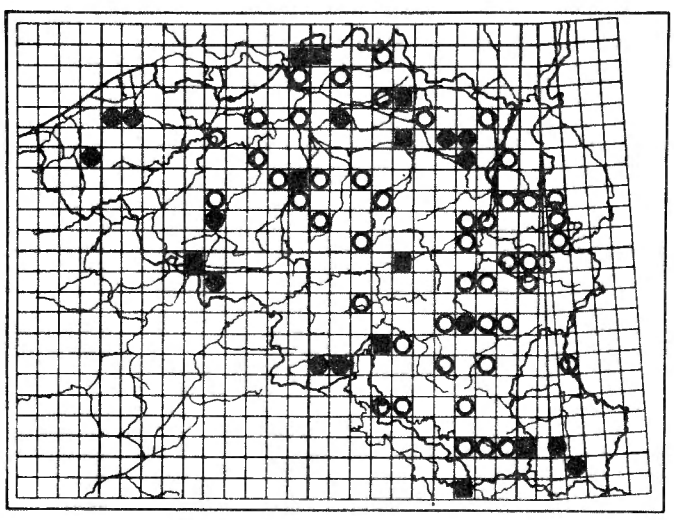
190. SPHODRUS leucophthalmus



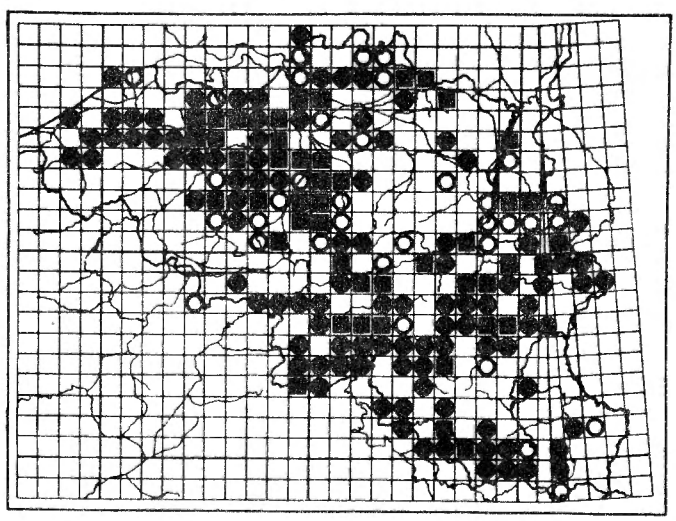
191. PRISTONYCHUS terricola



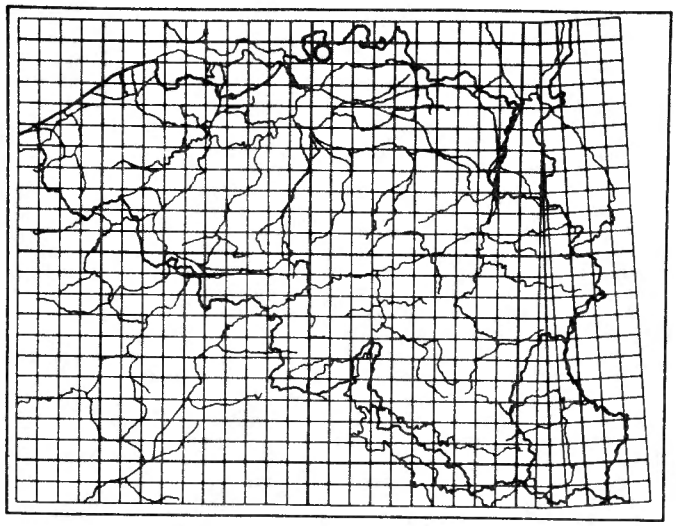
192. SYNUCHUS nivalis



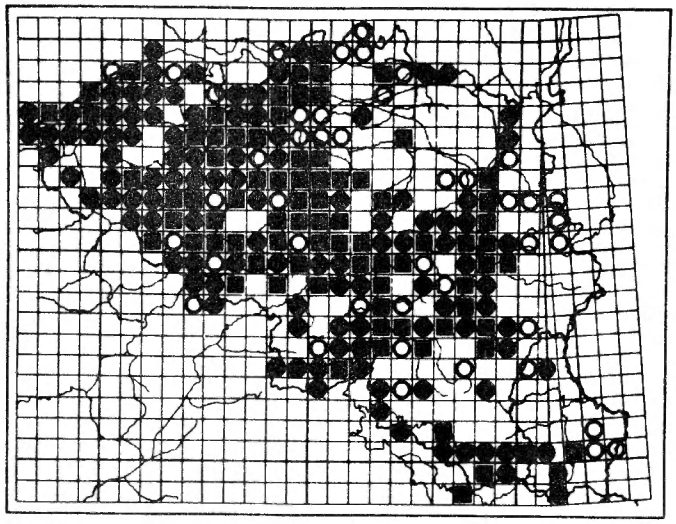
193. OLISTHOPUS rotundatus



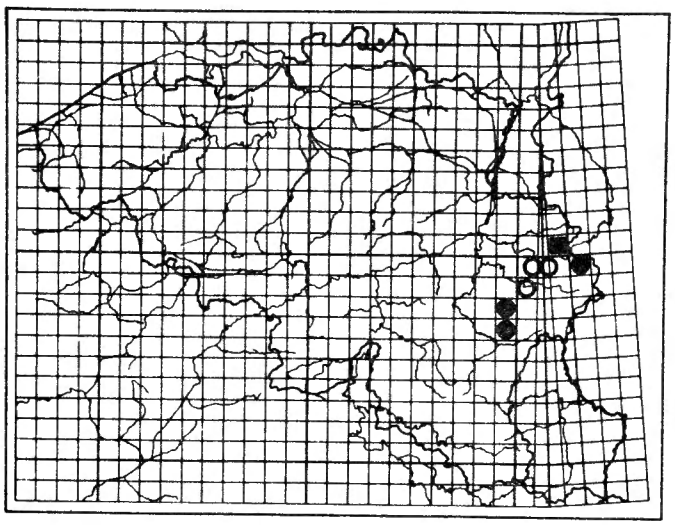
194. AGONUM assimile



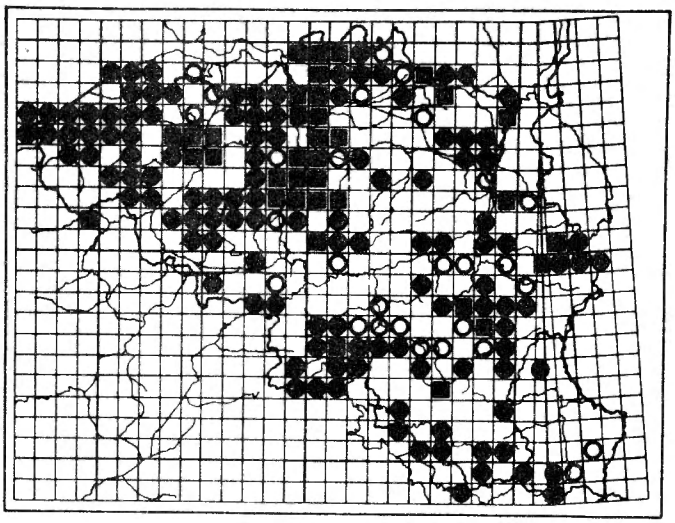
195. *AGONUM dolens*



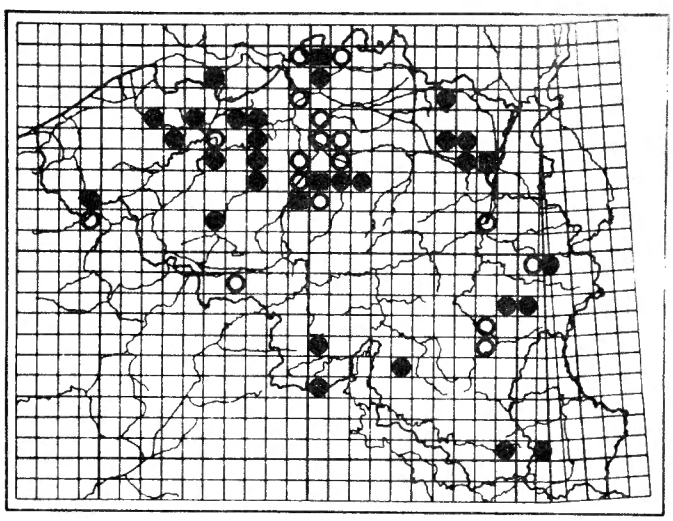
196. *AGONUM dorsale*



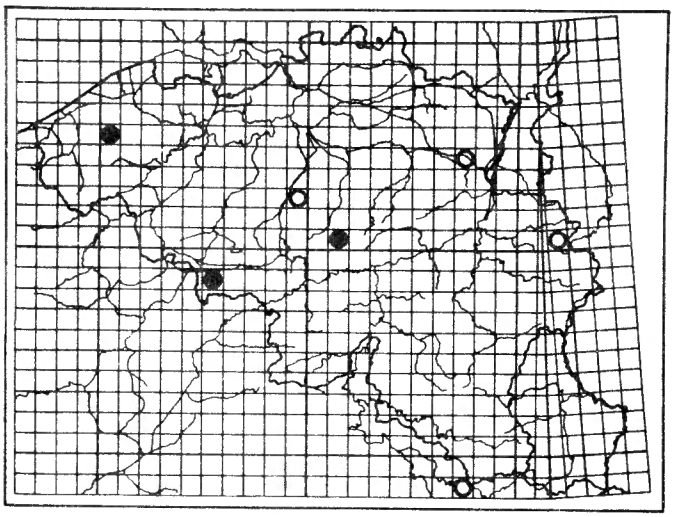
197. *AGONUM ericeti*



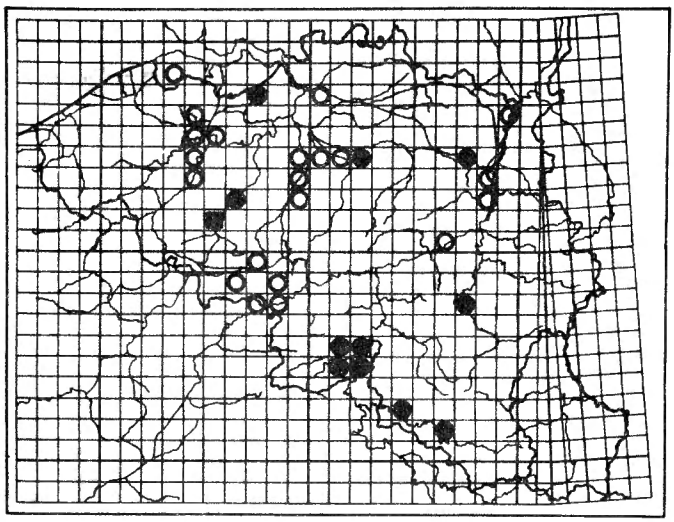
198. *AGONUM fuliginosum*



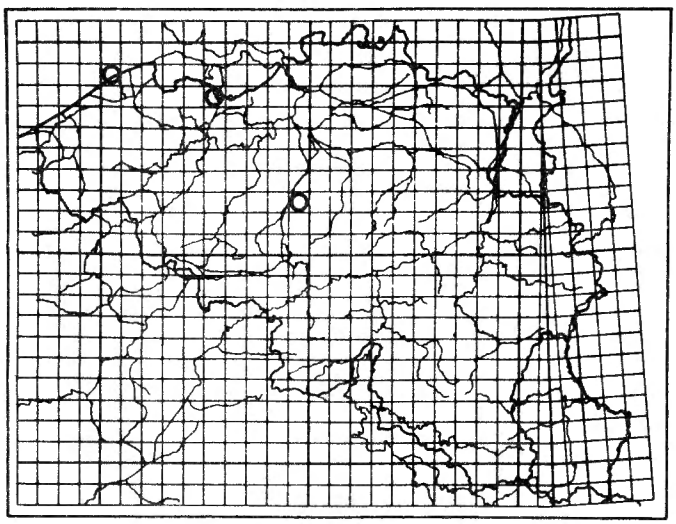
199. *AGONUM gracile*



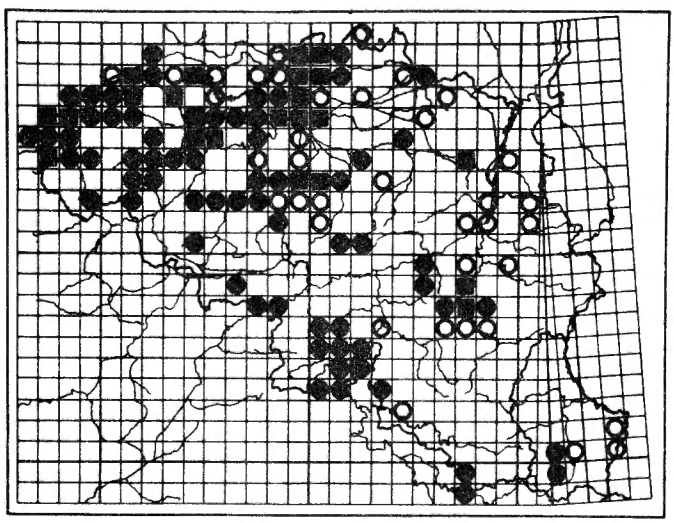
200. *AGONUM gracilipes*



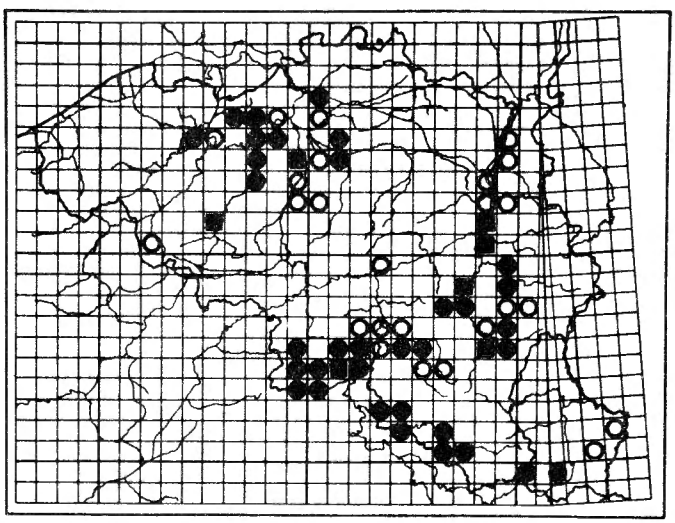
201. AGONUM livens



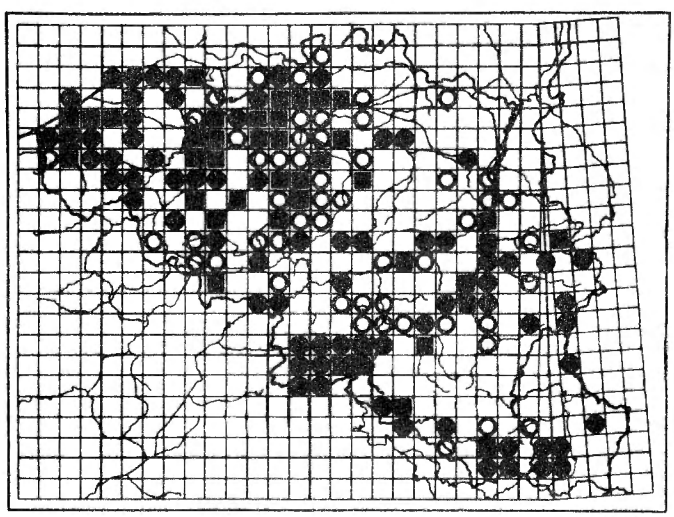
202. AGONUM lugens



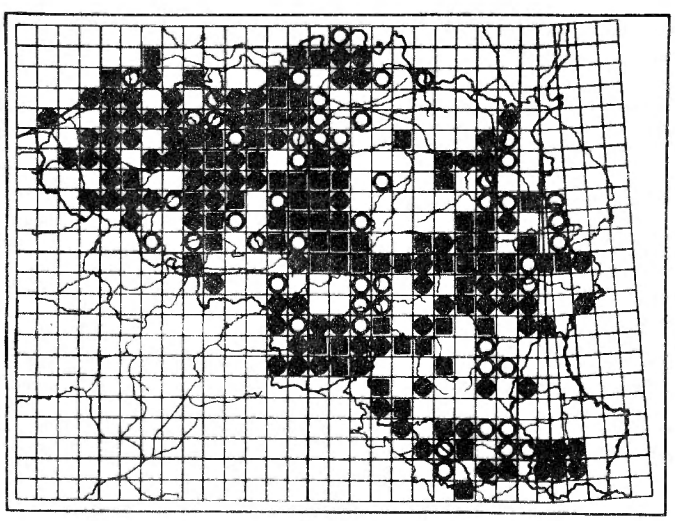
203. AGONUM marginatum



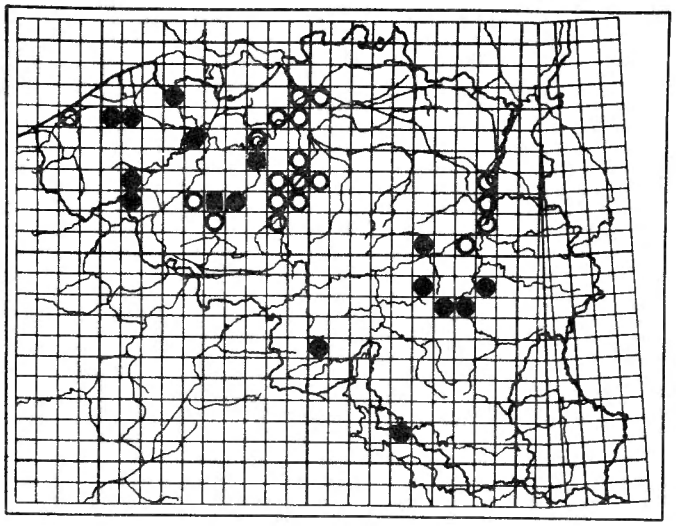
204. AGONUM micans



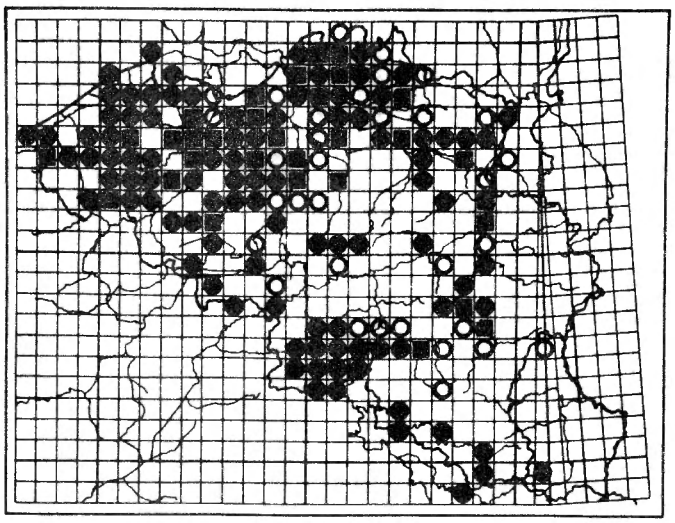
205. AGONUM moestum



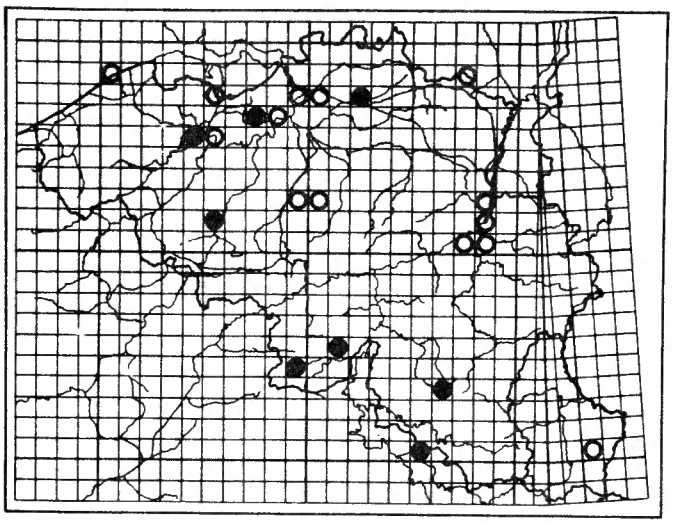
206. AGONUM muelleri



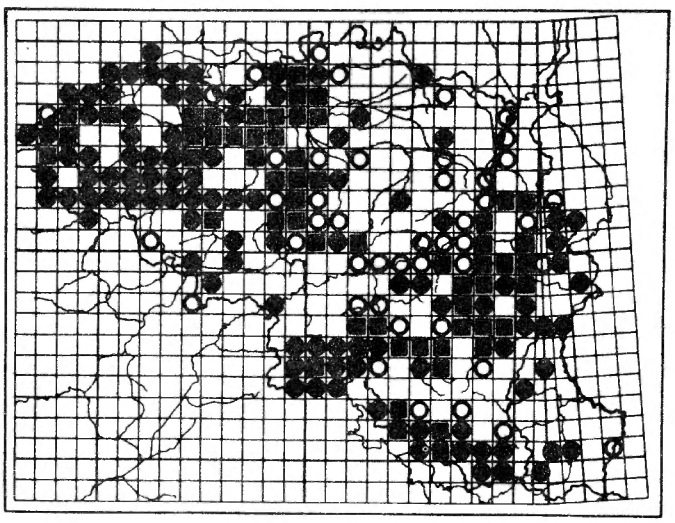
207. AGONUM nigrum



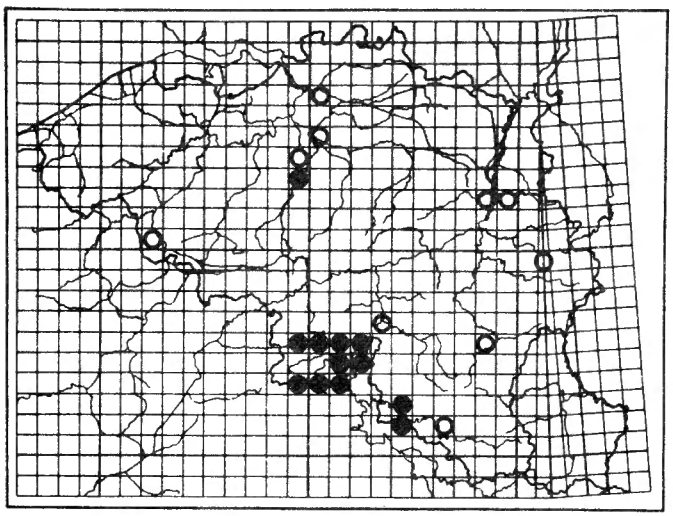
208. AGONUM obscurum



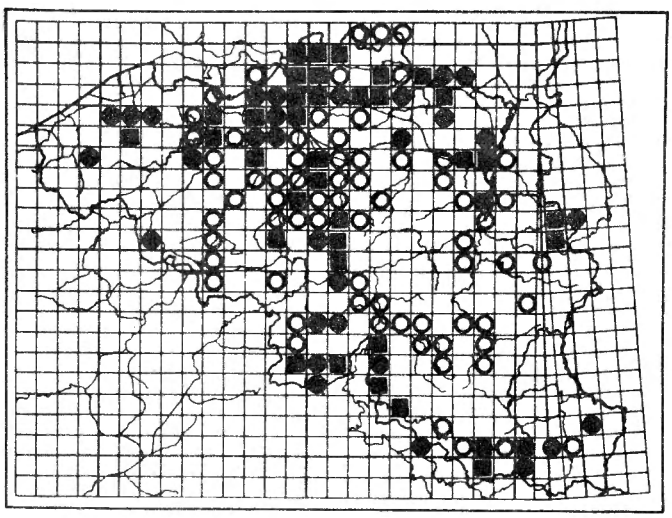
209. AGONUM piceum



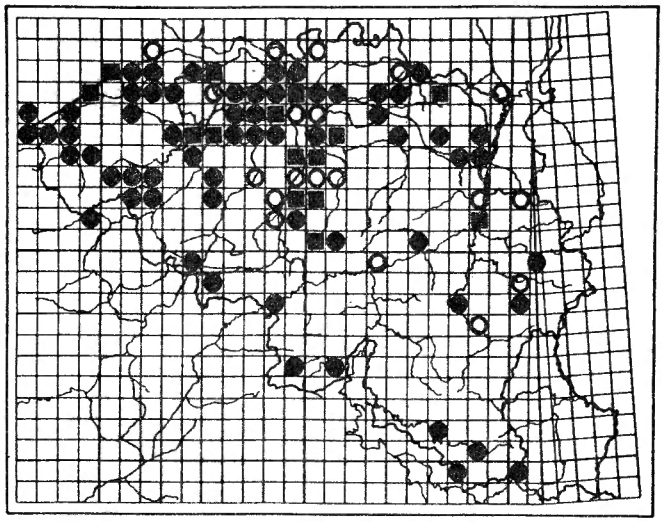
210. AGONUM ruficorne



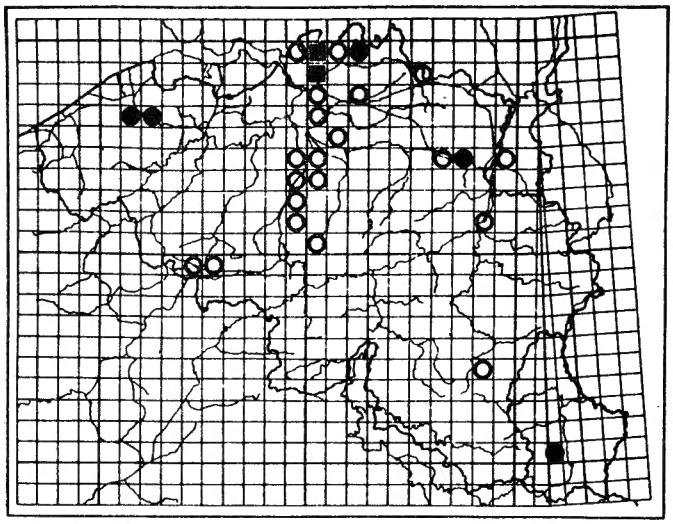
211. AGONUM scitulum



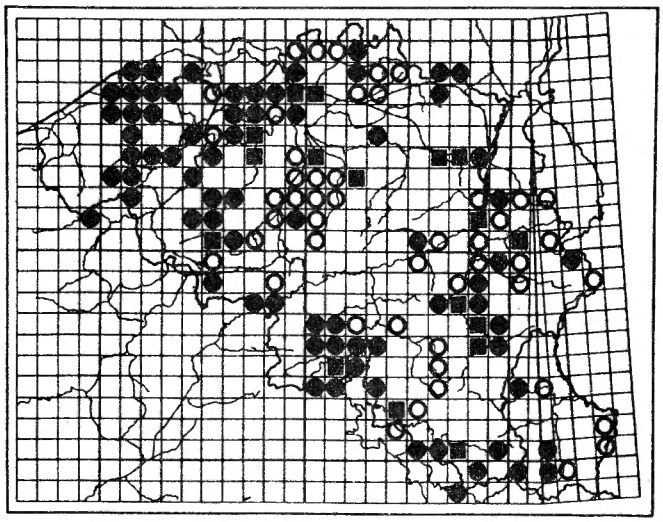
212. AGONUM sexpunctatum



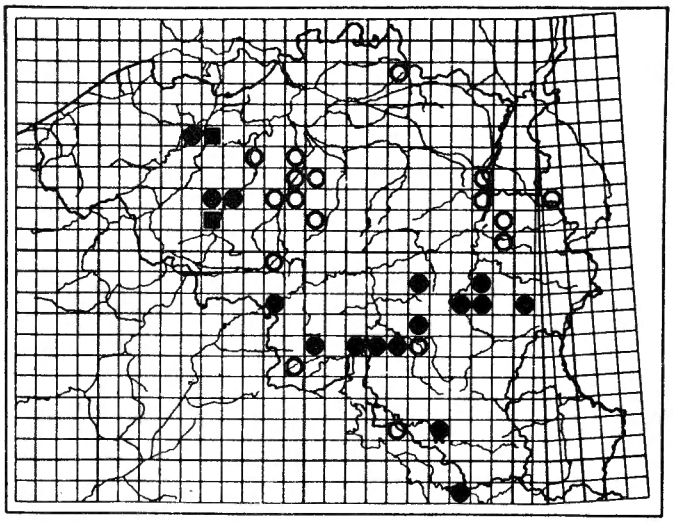
213. *AGONUM thoreyi*



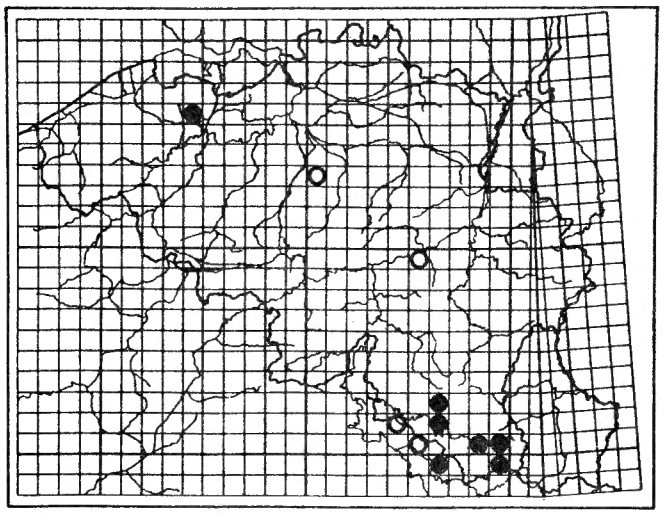
214. *AGONUM versutum*



215. *AGONUM viduum*



216. *AGONUM viridicupreum*



217. *PERIGONA nigriceps*

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