

Distribution of subspecies of the flea *Ctenophthalmus agyrtes* in and around Austria

by

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Material recently received for study from Prof. Dr M. BEIER (Wien) and Mr I. SZABÓ (Budapest) fills a number of gaps in the still insufficiently known distribution of various subspecies of *Ctenophthalmus agyrtes*, a common flea of a number of micromammalia in the greater part of Europe. No less than five subspecies occur in Austria:

(1) *Ctenophthalmus agyrtes agyrtes* (Heller, 1896). This subspecies deeply penetrates the eastern part of the country from Czechoslovakia and nearly reaches the middle portion of the frontier with Yugoslavia at Gösselsdorfer See and Pernitzen-Brücke (Fig. 1). It will also be seen from the map that the area of intergrades between the nominate subspecies and *a. smitianus* is fairly wide, just as is the case in The Netherlands (see SMIT, 1962, *Tijdschr. Ent.* 105 : 59, 60, fig. 7). Although it is not always easy to determine the status of specimens which are actually intermediate between two subspecies, I have not yet seen any that are obvious intermediates between *a. agyrtes* and *a. bosnicus*.

(2) *Ctenophthalmus agyrtes smitianus* Peus, 1950. Mainly confined to Oberösterreich, the range of *a. smitianus* continues between those of *a. agyrtes* and *a. impavidus* through Germany and into the southern half of the Netherlands.

(3) *Ctenophthalmus agyrtes impavidus* Jordan, 1928. Although it has been collected in relatively few localities in Austria, it is obvious that this subspecies occupies the narrow western half of the country and goes as far east as Salzburg.

(4) *Ctenophthalmus agyrtes wagnerianus* Peus, 1950. Originally described from material from Rateče, this subspecies was hitherto only known to occur in Slovenija. As the map (Fig. 1) shows, the extension of its range into Kärnten was to be expected. This form is characterized in the male by the combination of a clasper and sternum IX of the *a. agyrtes* type with a rather broad, smoothly margined aedeagal lamella. However, there is noticeable variation in the surface sculpture of the lamella. On the whole *a. wagnerianus* seems to be a fairly unstable form, gradually changing and linking *a. impavidus* in the west with *a. bosnicus* in the east. As *a. wagnerianus* appears to occur over a reasonably extensive area and intergrades with *a. impavidus* in the Dolomites, its status is best retained as that of subspecies. There are also signs of intergradation with *a. bosnicus* in specimens from Bohinjska Bistrica and Ljubljana but the sample available for study from those localities has been insufficient and does not permit a firm decision one way or another. Collecting in the large gaps to the west and north-west and to the east and south-east of the known range of *a. wagnerianus* (see Fig. 1) will be most rewarding.

(5) *Ctenophthalmus agyrtes bosnicus* Wagner, 1930 (subsp. *revocata*). The map (Fig. 1) shows that in Austria this subspecies occurs only in the south-eastern part of Steiermark. Very little was known about this form and e.g. its occurrence in western Hungary (see Fig. 1) is published here for the first time, the records

the entire area cornered by Maribor and Bezdan in the north and by the Prej Planina and the Durmitor Mts in the south would presumably be occupied by *a. bosnicus*. Furthermore he surmised that *a. bosnicus* would doubtless extend northwards of Bezdan into Hungary (this proves to be the case) but he was not certain whether it would extend into Austria north of Maribor or that the river Drava would possibly constitute the northern limit of the range of *a. bosnicus*. It has now been ascertained that the Drava does not act as a barrier and that *a. bosnicus* does extend into Austria north of Maribor. It is unfortunate that no specimens of *agyrtes* are known to have been collected in the very large area between eastern Slovenija and Bezdan in the north and Prej Planina, Igman and Durmitor Mts in the south. However, a paralectotype of *a. bosnicus* (from the Mali Igman) agrees rather well with a specimen from Kisbalaton (Hungary). If material from the large intermediate region would eventually show that there are slight differences between the southern and northern populations, then the name *agyrtes hadzhi* Rosický & Carnelutti, 1959, must be applied to the northern ones as this subspecies was described from Srednja Bistrica and Rakičan. SMIT (1963, *Bull. Brit. Mus. (nat. Hist.), Ent.* 14 : 146) placed *a. bosnicus* as a synonym of

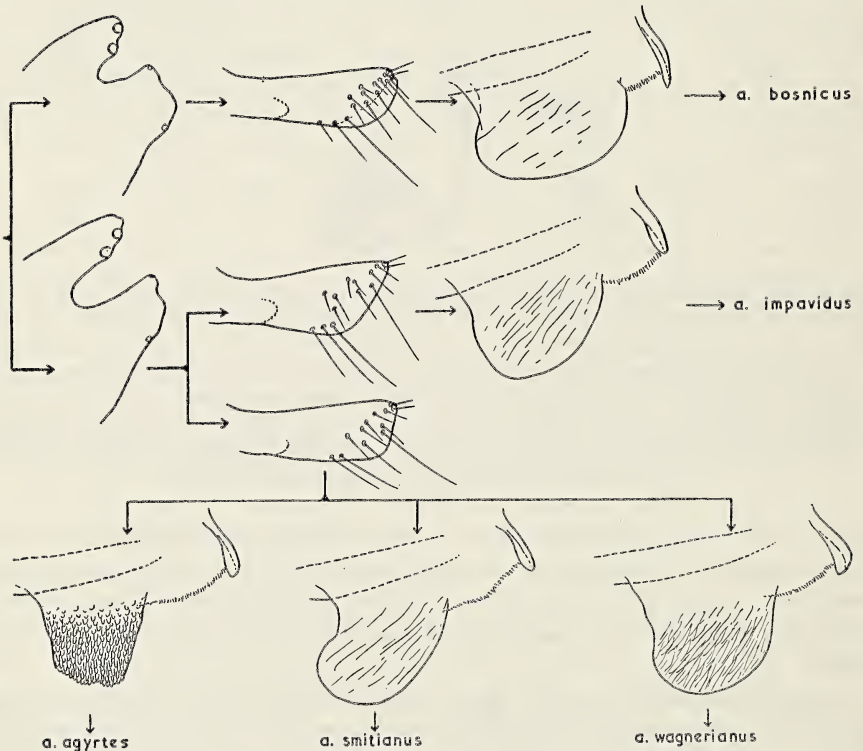


Fig. 2. Pictorial key to ♂ of five subspecies of *Ctenophthalmus agyrtes* occurring in Austria. The structures shown (fixed process of clasper, distal arm of sternum IX and aedeagal lamella) were drawn from Austrian specimens: *a. bosnicus* from Mur-Au; *a. impavidus* from Ferleiten; *a. agyrtes* from Eisenerz; *a. smitianus* from Steyr; *a. wagnerianus* from Krasznig-Graben.

a. serbicus Wagner, 1930, but this appears to be incorrect. The same author (*l.c.*: 146) synonymized *a. badzhii* with *a. serbicus* but the former should now be placed into synonymy with *a. bosnicus*.

A pictorial key to the subspecies of *C. agyrtes* occurring in Austria is given in Fig. 2.

The names of the localities shown in Fig. 1 can be found by the usual co-ordinates method (longitude first; longitude and latitude are here arbitrary figures). The center of a letter or letter-group is the location of the collecting locality. The localities, listed per country in north-eastern direction, are preceded by the co-ordinates of Fig. 1:

AUSTRIA: 42.70 Krasznig-Graben. 42.77 Gösselsdorfer See. 44.82 Pernitzen-Brücke. 44.90 Mur-Au and Laafeld. 50.89 Kalsdorf. 52.89 Graz. 54.74 Furtner Teich. 55.23 Ober Gurgl. 59.50 Ferleiten and Moserboden. 60.101 Krumbach. 62.83 Gerichtsgraben and Prebichl Pass. 63.70 Donnersbach. 63.82 Eisenerz. 64.11 Aelpele. 64.78 Hesshütte. 65.75 Admont. 66.5 Satteins. 68.43 Wildbichl. 72.73 Leonstein. 72.76 Grosse Dirn. 72.102 Baden. 72.105 Müchendorf. 73.95 Hainfeld. 74.61 St Georgen. 74.87 Purgstall and environs. 74.103 Kaltenleutgeben. 74.104 Kalksburg. 75.73 Bad Hall. 75.76 Steyr. 76.104 Wien. 77.70 Wels. 79.75 Ebelsberg. 79.100 Tullnerbach. 80.74 Linz. 81.70 Eferding. 87.70 Rohrbach.

GERMANY: 68.54 Berchtesgaden. 71.26 Ettal. 80.33 Planegg. 87.36 Haag am Amper.

CZECHOSLOVAKIA: 67.124 Calovo. 74.116 Stefanikovec, Petržalka and Podunajské Biskupice. 90.72 Černá v Pošumaví. 100.65 Kašperské Hory. 104.68 Horažďovice. 105.102 Rožna nad Pernštejnem. 113.76 Dobříš.

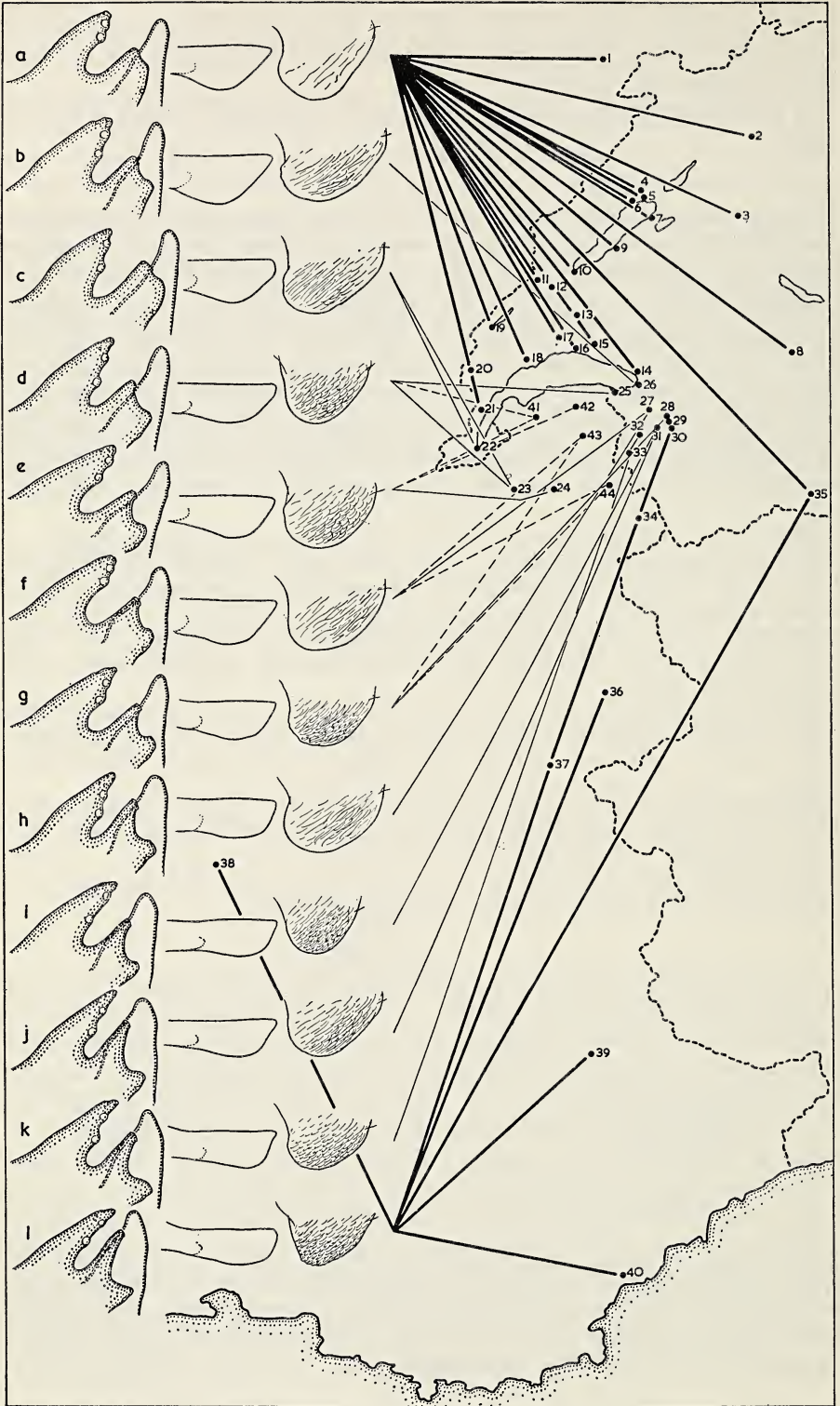
HUNGARY: 34.122 Kaposmérő. 42.115 Kisbalaton. 43.123 Balatonlelle. 47.106 Szöce. 50.124 Sárcsikut. 53.122 Némethanya, Iharkút and Kőrös hegy. 54.124 Bakonybel. 55.116 Külsövát. 70.116 Rajka.

YUGOSLAVIA: 19.58 Sečovlje. 23.71 Jurišče. 31.73 Ljubljana. 34.75 Kamnik, Kamniška Bistrica, Vrhpolje and Krvavac Planina. 36.65 Bohinjska Bistrica. 37.99 Sveti Miklavž. 38.61 Vodnikova Koča. 38.73 Jezersko. 41.62 Rateče. 41.100 Srednja Bistrica. 42.99 Rakičan.

ITALY: 40.35 San Martino di Castrozza. 46.29 Fiè (Völs), Laghetto di Fiè (Völser Weiher) and Schlern. 46.39 Faloria Alp. 46.41 Misurina and Monte Cadini. 48.39 Prato Piazza (Plätzwiese). 51.24 Merano.

SWITZERLAND: 48.5 Val Roseg. 49.4 Campfer and St Moritz. 49.6 Schafberg. 52.10 Nationalpark. 54.12 Vulpera and Tarasp. 56.6 Aelpeltispitzalp.

It seems opportune to append an excellent and instructive example illustrating intersubspecific variation as provided by ♂ *agyrtes* specimens from a considerable area south of Lac Léman, a meeting-place of *a. impavidus* Jordan from the north and *a. provincialis* Rothschild from the south. These two subspecies differ markedly in three important characteristics: (a) shape of clasper, (b) shape of distal arm of sternum IX, (c) shape and surface sculpture of the aedeagal lamella. As is shown in Fig. 3, in the area concerned there is a perfect sliding cline-like transgression from the one subspecies into the other. Forms similar to the ones depicted in Fig. 3d—g were described as *C. agyrtes sapaudianus* Beaucournu, 1964, but it is obvious that this name is not tenable as one for a taxon of full subspecific status. The specimens described as *C. a. sapaudianus* tending on the whole a little more towards *a. impavidus* than to *a. provincialis*, I regard the name *Ctenophthalmus agyrtes sapaudianus* Beaucournu, 1964 (*Bull. Soc. zool. Fr.* 88 : 513) as a synonym of *C. a. impavidus* Jordan, 1928 (*Novit. zool.* 34 : 174) (*syn. nov.*).



The broken lines in Fig. 3 relate to specimens, figured by BEAUCOURNU as those of "*C. a. sapaudianus*", but which I have not seen.

The provenance of the specimens shown in Fig. 3a—l is: a — Estavayer-le-Lac; b — Villeneuve; c — Genève; d — Lac de Lovenex; e — Arâches; f — near Aigle; g — Villars; h — near Aigle; i — Bex; j — Bex; k — Champéry; l — Montroc.

The localities marked in Fig. 3 are the following: 1 Etupes, 2 Weissenstein, 3 Gurten and Bern, 4 Chaumont, Seyon, Val de Ruz, La Borcarderie and Bussy, 5 St.-Blaise, 6 Neuchâtel, Fenin, Fontaine-André and Pierre-à-Bot, 7 Cudrefin, 8 Kandersteg, 9 Estavayer-le-Lac, 10 Yverdon, 11 Lignerolle, 12 Orbe, 13 Prévondavaux, 14 Cornaux, 15 Mollie-Margot, 16 Lausanne, Romanel and Vidy, 17 Bussigny, 18 Aubonne, 19 Le Chenit, 20 Col de la Givrine, 21 Commugny, 22 Genève, 23 La Roche s/Foron, 24 Arâches, 25 Lac de Lovenex, 26 Villeneuve, 27 Aigle, 28 Villars, 29 Gryon, 30 Les Plans, 31 Bex, 32 Troistorrents, 33 Champéry, Grand Paradis and Barme, 34 Montroc, 35 Zermatt, 36 Pralognan, 37 Valloire, 38 Etoile s/Rhône, 39 Colmars, 40 Valescure, 41 Perrignier and Brécovens, 42 Vacheresse, 43 Essert-la-Pierre, 44 Sixt.



Rattink, H., Het geslacht *Tenthredo* Linné, 1746 (Hym., Tenth.) in Nederland. Wetenschappelijke Mededeling no. 62 van K. N. N. V. Gepubliceerd maart 1966.

De K. N. N. V. zet zijn serie korte entomologische monografieën voort met een eerste publicatie over de grote familie van de bladwespen. De studie telt 40 pagina's en is geïllustreerd met 24 figuren, 32 verspreidingskaartjes en even zoveel grafieken, waarop de verschijnings- en vangdata zijn uitgezet.

In totaal zijn nu 29 soorten van het geslacht uit Nederland bekend, sommige met een flinke verspreiding, andere zeer lokaal. Dat ook in deze groep onze kennis door verzamelaars nog aanmerkelijk verrijkt kan worden, is dan ook zonder meer duidelijk.

Slechts een paar opmerkingen over deze voortreffelijke W. M. In het hoofdstuk over de nomenclatuur zegt de schrijver terecht, dat LINNÉ de naam *Tenthredo* in 1758 voor het eerst gebruikte. Nomenclatorisch geldige namen van een vroegere datum kunnen niet bestaan, omdat de officiële zoölogische nomenclatuur pas begint met de publicatie van de 10de editie van het *Systema Naturae* in dat jaar. Waarom in de titel het jaartal 1746 gebruikt wordt, is dan ook niet duidelijk.

De verspreidingskaartjes zijn aldus samengesteld, dat de hele gemeente, waaruit een vondst bekend is, zwart gemaakt is. Als dat een uitgestrekte gemeente betreft, dan kan dat toch wel eens een te optimistische indruk geven en ook voor een gemeente met zeer verschillende biotopen, zoals Texel, (bv. fig. 9) lijkt me deze methode niet ideaal.

Dit zijn echter kleinigheden, die aan mijn waardering voor deze publicatie niets afdoen. De prijs ervan bedraagt f. 2,75 (maar voor leden van K. N. N. V. en Ned. Ent. Ver. f. 2,20), te voldoen door overschrijving op postrekening 13028 van het Bureau van de K. N. N. V. te Hoogwoud-N.H. — LPK.

The Cecidological Society of India. Van de heer W. NIJVELDT kreeg ik bericht, dat bovengenoemde vereniging opgericht was. Het adres is: The Cecidological Society of India, 14, Park Road, Allahabad, India, waar belangstellenden verdere inlichtingen kunnen krijgen. De vereniging geeft ook een eigen tijdschrift uit, *Cecidologica Indica*. — LPK.

Fig. 3. Distribution of *Ctenophthalmus agyrtus impavidus* (a) and *C. a. provincialis* (l), together with intergrades (b—k), in western Switzerland and south-eastern France. Explanation in text.