Taxonomic notes on three little-known species of Cleruchus Enock (Hymenoptera: Mymaridae) described by S. Novicky from Europe

Serguei V. TRIAPITSYN1,*, Vladimir V. BEREZOVSKIY1 and Gennaro VIGGIANI2

1. Entomology Research Museum, Department of Entomology, University of California, Riverside, CA 92521, USA.
2. Dipartimento di Entomologia e Zoologia Agraria «Filippo Silvestri», Università degli Studi di Napoli «Federico II», Portici, Italy.

* Corresponding author, S. V. Triapitsyn, E-mail: sergei.triapitsyn@ucr.edu

Received: 08. December 2011 / Accepted: 16. June 2012 / Available online: 08. September 2012 / Printed: June 2013

Abstract. Type specimens of the three species of the fairyfly wasp genus Cleruchus Enock (Hymenoptera: Mymaridae), C. janetscheki Novicky (Austria), C. megatrichus Novicky (Poland), and C. szelenyi Novicky (Hungary) were identified and labeled. These little-known species, not seen by taxonomists since their original description, are redescribed and illustrated after remounting in Canada balsam on slides. Lectotypes are designated for C. megatrichus and C. szelenyi, and also for C. detritus Bakkendorf (Switzerland). Cleruchus subterraneus Viggiani, syn. n., is synonymized under C. janetscheki. Records of C. pluteus Enock collected by S. Novicky in Poland are also given.

Key words: Insecta, Hymenoptera, Mymaridae, Cleruchus, taxonomy, Europe.

Introduction

Forest Engineer Svatoslav Novicky (Światosław Nowicki) was a Polish (mainly amateur) entomologist who, as a taxonomist working on several families of Chalcidoidea (Hymenoptera), published an important paper (Novicky 1965) on the European species of Cleruchus Enock, a rather poorly known cosmopolitan genus of fairyflies (Mymaridae). The generic diagnosis of Cleruchus was given by Enock (1909), Debauche (1948), Schauff (1984), and Pricop (2011) but their definitions are too narrow to encompass properly its worldwide diversity (Triapitsyn 2002; Triapitsyn & Moraal 2008) although they are more or less appropriate for the Holarctic species. In the Palaearctic region, both sexes of Cleruchus can be identified using the generic key in Triapitsyn & Huber (2000) although they are too narrow to encompass properly its worldwide diversity (Triapitsyn 2002; Triapitsyn & Moraal 2008) although they are more or less appropriate for the Holarctic species. In the Palaearctic region, both sexes of Cleruchus can be identified using the generic key in Triapitsyn & Huber (2000). In Europe, most Cleruchus species described were keyed by Novicky (1965). His key was expanded by Trjapitzin (1978). The little-known species of Cleruchus described by Novicky (1965) were not seen by taxonomists since description, probably because they were named in a key without any illustrations; besides, their types were not available. They are redescribed and illustrated here.

The entire S. Novicky collection of Mymaridae was donated by him to the third author (Viggiani 2011) and now is part of the Entomological Collection of Dipartimento di Entomologia e Zoologia Agraria «Filippo Silvestri», Università degli Studi di Napoli «Federico II», Portici, Italy (DEZA). Most specimens were collected by S. Novicky himself during his extensive travels although some were apparently donated by other European entomologists, mainly from Austria and Hungary. Also a number of fairyfly specimens collected by Novicky are present in the Walter Soyka collection of Mymaridae at the Naturhistorisches Museum Wien, Vienna, Austria (Triapitsyn 2010). The specimens in Vienna were apparently donated by Novicky and are all mounted on slides in Canada balsam by W. Soyka, and thus most are in fair condition. Unfortunately, as described by Viggiani (2011), the main S. Novicky collection of Mymaridae at DEZA is in a very poor shape: each specimen (or sometimes several specimens) was (were) dipped in liquid Faure (or Hoyer’s) medium and either covered on both sides with two pieces of coverslips or just mounted on one coverslip, thus making a very small “slide” that was glued over a circular hole on a card (Figs 1–3). The card also served as a primary data label and in some cases as an identification label; all the labels are extremely difficult (often impossible) to read because of his poor handwriting and frequent omissions of critical data. With time, the mounting medium on most “slides” has darkened and dried out to the point the specimens became severely fragmented (ruptured by the drying water-soluble mounting medium). These specimens were mostly impossible to see and thus were in great need of being remounted on normal slides in Canada balsam for proper study (Viggiani 2011).

Material and Methods

In 2011, the entire S. Novicky collection of Cleruchus, con-
Taxonomic notes on Cleruchus

Figure 1–3. Original mounts of the primary types of Novicky’s Cleruchus species: (1) Holotype of C. janetscheki; (2) Lectotype of C. megatrichus; (3) Lectotype of C. szeleynyi.

Figure 4–7. Slides with the remounted types of Novicky’s Cleruchus species (in Canada balsam): (4) Holotype of C. janetscheki; (5) Lectotype of C. megatrichus; (6) Paralectotype of C. megatrichus; (7) Lectotype of C. szeleynyi.

Sisting of 21 of his mounts (Viggiani 2011), was sent from DEZA to the Entomology Research Museum at the Department of Entomology, University of California, Riverside, California, USA (UCRC) for remounting, curating, and study. As noted by Viggiani (2011, also see his Figure 2, page 103), most specimens, including even the type series of the three species described by Novicky, did not include clear, species identifiers. Associating the specimens with their proper scientific names was difficult and time consuming detective work, but we succeeded by comparing the scarce label data with collecting information given in Novicky (1965) and are 100% sure that our identifications of the type specimens are correct. We also compared the types with the short original descriptions; these matched very well although Novicky made several important mistakes, probably due to the poor condition of his specimens. At UCRC, all the original mounts were photographed, and then the “slides” were soaked in distilled water to float off the specimens. They were then cleared in 10% KOH and remounted in Canada balsam on individual slides by the second author following standard slide-mounting procedures. The original labels were glued onto these new slides, and proper identification labels were added by the first author (Figs 4–7).

The Novicky collection of Cleruchus also contained several, similarly mounted specimens of C. pluteus Enock (or apparently belonging to or near this species as some specimens are too fragmentary to be absolutely sure), the most common European species of the genus, and also an unidentified, incomplete female that definitely belongs to another species. Information on the specimens of C. pluteus is included here. One female was disassociated from its original mount so we are not sure about its label data except that it had been collected in Mazovia (then Warsaw Voivodeship, now Masovian Voivodeship), Poland (Novicky 1965). All these specimens were remounted in Canada balsam on individual slides. One non-type “slide” of a Cleruchus was missing from its original mount.

Types and other specimens of Cleruchus species described by Bakkendorf (1964) and Viggiani (1970) were received by the first author on loan from Muséum d’histoire naturelle de la Ville de Genève, Geneva, Switzerland (MHNG).

Measurements of the S. Novicky specimens were made after they had been remounted; unless otherwise indicated, all measurements (as length or length:width for the wings) are given in micrometers (µm). Terms for morphological features follow Gibson (1997). Abbreviations used are: F = funicle segment of the female antenna or flagellomere of the male antenna; mps = multiporous plate sensillum or sensilla on the antennal flagellar segments (= longitudinal sensillum or sensilla or sensory ridge(s) of authors).

Results and Discussion

Biology: Hosts of Cleruchus are poorly known; the few available host records were reviewed by
Huber (1986), these include Acrididae (Orthoptera) and Cleridae (Coleoptera). *Cleruchus pieloui* (Yoshimoto), *C. polypori* Triapitsyn & Moraal, and *C. puchus* Triapitsyn were reared from the bracket fungi (Polyporales: Fomitopsidaceae) and are apparently associated with Ciidae (Coleoptera) (Triapitsyn & Moraal 2008). A species quite similar to *C. polypori* was also reared from the bracket fungi in Karelia (Russia) (Triapitsyn et al. 2011). Other potential host associations of *Cleruchus* species were discussed by Novicky (1965).

**Synopsis of the species**

*Cleruchus janetscheki* Novicky, 1965
(Figs 1, 4, 8–15)

*Cleruchus janetscheki* Novicky 1965: 59 (in key).  
Type locality: 2040 m, summit of Kanisfluh [massif], Vorarlberg, Austria.


*Cleruchus janetscheki* Novicky: Triapitzin 1978: 531 (key, distribution); Vidal 2001: 61 (list).


*Cleruchus subterraneus* Viggiani: Triapitsyn 2002: 5, 8 (compared with the species from the Russian Far East); Viggiani 2005: 63–64 (illustration of male genitalia, short diagnosis, distribution).

**Type material examined:** Holotype female of *C. janetscheki* Novicky [DEZA], on slide (Fig. 4) labeled: 1. [the original label] “Vbg. [i.e., an abbreviation for Vorarlberg] 1960 [perhaps a sample number or an indication to the correct elevation] 14 A° Kl. [possibly an abbreviation for Kanisfluh] Hym Cl. janet.”; 2. “*Cleruchus janetscheki* Novicky ♀ Holotype Det. & labeled by S. V. Triapitsyn 2011”; 3. “Remounted from dry liquid Faure at UCR/ERM by V. V. Berezovskiy 2011 in Canada balsam”. The holotype specimen (Figs 8–10) is in poor condition, with leg segments fragmented (some are missing); the original mount was as in Fig. 1. According to Novicky (1965), the paratype female, which was not examined, was in the collection of the Biological Station Obergurgl, University of Innsbruck (now at the Alpine Research Centre Obergurgl), Obergurgl (Ötztal Valley near...
Innsbruck), Tyrol, Austria. The type series was collected by H. Janetschek using Berlese funnels, the sample of high alpine soil was taken in a grassy pasture (Novicky 1965).

Holotype female of *C. subterraneus* Viggiani [MHNG] on slide (Fig. 11) labeled: 1. "Cleruchus longicornis Vigg. Holotype [underlined in red] From determin. G. VIGGIANI '71": 2. "t. 88 Italia, prov. de Bergamo – Fondra, au pied arbres, 25.VI.66 coll. Mus. Genève". It was well described and illustrated by Viggiani (1970) as the winged female of *C. longicornis*. The holotype is in fair condition, with head plus antennae attached to it, one fore wing, most of the other fore wing, and most of one hind wing detached from the body, which is mounted more or less dorsoventrally. The mounting medium (Hoyer’s) is darkened (Fig. 11) but that does not prevent the specimen to be visible well enough; the holotype has not been remounted in Canada balsam also because of the risk of losing the detached body parts in the process.

Material examined: ITALY, Lombardy, Bergamo Prov., Isola di Fondra Municipality, Fondra, 25.vi.1966, C. Besuchet (from soil taken near bases of trees) [5 apterous females on a slide, MHNG]. SWITZERLAND, Ticino (Tessin), Mendrisio District, Besazio, 20.viii.1975, C. Besuchet (from dead leaves) [1 apterous female, 1 apterous male on a slide, DEZA].

Redescription: FEMALE (holotype of *C. janetscheki*). Body dark brown except base of gaster a little lighter (brown), antenna brown except clava light brown, legs light brown to brown. Head (Fig. 9) flattened, about as long as wide in dorsal view, and a little wider than mesosoma. Vertex large, trapezoidal, almost smooth; eye with at least 6 or 7 ommatidia laterally in dorsal view; ocelli present and quite small, in a very obtuse triangle. Face trapezoidal, small, faintly sculptured; torulus large, subtriangular, below lower level of eye. Antenna (Fig. 8) with scape almost smooth; radicle well-differentiated, small; remainder of scape 4.8 x as long as wide. Pedicel 2.0 x as long as wide, much longer than F1. All funicle segments longer than wide, among them F1 the shortest, F2 the longest, and F6 the widest; possibly F5 and apparently F6 each with 1 mps on one antenna but definitely without mps on the other; clava long, slightly shorter than or about as long as combined length of F2-F6, entire. 3.6 x as long as wide, apparently with 7 (at least with 6) mps. Mesosoma (Fig. 9) mostly long. Pronotum large (it is not clear if the pronotum is divided mediolongitudinally or not); mesoscutum very short, much wider than long, its midlobe (although notauli not evident, perhaps due to the poor condition of the specimen) with a pair of setae; scutellum rather small; propodeum longer than mesoscutum or scutellum. Strongly brachypterous according to Novicky (1965) but rudiments of fore wing (each with just one macrochaeta at apex according to the original description) not visible in the remounted specimen. Petiole much wider than long; gaster (Fig. 10) a little longer than mesosoma; ovipositor 0.6 x length of metatibia and occupying a little more than 0.4 x length of gaster, exserted slightly beyond its apex.

Measurements of the holotype of *C. janetscheki*:

MALE. Viggiani (2005) illustrated and described the male genitalia of the only known male specimen from Besazio, Switzerland [as *C. subterraneus*]. Body length 627. Head large, much wider than mesosoma (Fig. 15); ocelli present. Antenna (Fig. 14) with flagellum 10-segmented; scape minus radicle 3.7-3.8 x as long as wide; all flagellomeres at least a little longer than wide and with at least one mps (except F1 without). Strongly brachypterous (or almost apterous, rudiments of fore wings very short, without membrane). Petiole wider than long; gaster longer than mesosoma. Genitalia length 94.

Discussion: The combination of: ocelli present (Novicky (1965) incorrectly stated that they were absent), ovipositor 0.6 x metatibia length, and funicle segments of the female antenna all longer than wide distinguishes this species from other European *Cleruchus* species.

*Cleruchus sclewnyi* Novicky females lack ocelli and have most funicle segments shorter than wide (Figs 25, 28). The strongly brachypterous females of *C. europaeus* Özdikmen [= *C. terebrator* Viggiani] (Viggiani 1970; Özdikmen 2011) differ from apterous and strongly brachypterous females of *C. janetscheki* by the ovipositor about 1.4 x length of metatibia.

Discussion: The holotype of *C. janetscheki* is identical to the apterous, non-type females of *C. subterraneus* Viggiani [= *C. longicornis* Viggiani] (Viggiani 1970, 1974), hence the synonymy; both species were collected in the same habitat and in the same general area of the Alps. Both macrop terous and apterous females of *C. subterraneus* have ocelli (Viggiani 1970 [as *C. longicornis*], identical antennae without mps on funicle segments,
and a short ovipositor. The species thus can have macropterous (responsible for dispersal), strongly brachypterous, and apterous (Fig. 13) females and almost apterous males (Fig 15); the only fully winged individual known is the holotype of C. subterraneus, which is a large female (body length 960 µm) whereas the brachypterous and apterous females are smaller (body length 560-750 µm).

**Distribution:** Austria, Italy (Viggiani 1970; Viggiani & Jesu 1988) [as C. longicornis], and Switzerland (Viggiani 2005 [as C. subterraneus]). Vidal (2001) listed C. janetscheki from Germany but that needs confirmation: it is not clear on what material this listing was based on.

**Hosts:** Unknown.

**Cleruchus megatrichus Novicky, 1965** (Figs 2, 5, 6, 16–24).


**Type material examined:** Lectotype female [DEZA], here designated to avoid confusion regarding the status of the type specimens of this taxon, on slide (Fig 5) labeled: 1. [the original label] “Miensia (Miensk M) 2.8.42 © Cleruchus N. [in blue ink]”; 2. “Cleruchus megatrichus Novicky © LECTOTYPE Det. by S. V. Triapitsyn 2011” 3. “Remounted from dry liquid Faure at UCR/ERM by V. V. Berezovskiy 2011 in Canada balsam”. The lectotype (Figs 16, 18, 20) is one of the better preserved specimens among the original syntypes; it is in fair condition although lacking clava of one antenna, apical half or so of one fore wing, both hind wings, and tibia and tarsus of one hind leg; the original mount was as in Fig. 2. Paralectotypes [DEZA]: 1 female on slide labeled (the original label) ‘E.K.D. 17.VII.1935 [illegible words]’; 1 female on slide (Fig. 6) labeled (the original label): “E.K.D. 1.VI.1935 Cleruchus meg [in blue ink]” 3. 1 male on slide (mounted together, but now under different coverslips, with fragments of 2 female C. plateus) labeled (the original label): “Grójec Wola Turowska 27.VI.1935” ”im Walde b.[ei] Wólka Turowska, Landkreis Grójec b.[ei] Warschau” in the original description - i.e., in forest near Wólka Turowska, Grójec Co., Masovian Voivodeship, Poland. All specimens of the type series were collected by S. Novicky; they are in poor to moderate condition, fragmented, and lacking some body parts; particularly only scape and pedicel of one antenna and scape, pedicel, and F1-F3 of the other remain of the antennae of the single male paralectotype, which also lacks all the wings.

**Redescription:** FEMALE (lectotype and paralectotypes). Body length 756–849. Body dark brown, antenna brown, legs light brown to brown. Head (Figs 16, 19) a little wider than long in dorsal view and about as wide or slightly wider than mesosoma. Eye normal; vertex smooth, ocelli present. Face smooth; torulus below lower level of eye. Antenna (Figs 16, 17) with scape almost smooth; radicle very small; remainder of scape 3.1-3.7 x as long as wide. Pedicel 1.7-1.9 x as long as wide, much longer than F1. F1 about as long as wide and the shortest funicle segment, F2-F5 slightly but clearly longer than wide, F6 about as wide as long or slightly wider than long, F2 a little longer than F1 and slightly shorter than following funicle segments. F3-F6 subequal in length, all funicle segments without mps; clava about as long as to a little longer than combined length of F3-F6, entire, 2.6-2.8 x as long as wide, with 6 mps. Mesosoma (Figs 18, 19) mostly smooth except axilla with a faint sculpture. Pronotum relatively large, divided mediolongitudinally. Mesoscutum much wider than long, its midlobe with a pair of adnotaular setae. Axilla with 1 seta. Scutellum a little shorter than mesoscutum, plaided sensilla closer to anterior margin of scutellum. Metaturn narrow, strap-like and hardly noticeable. Propodeum almost as long as mesoscutum. Macropterus. Fore wing (Figs 20, 21) 10.1-10.7 x as long as wide, with almost parallel margins and venation typical of the genus; hypochaeta extending to posterior margin, both macrochaetae moderately short; disc infuscated, particularly conspicuously basally and in apical half or so, with 1 incomplete, length of metatibia and occupying 0.55-0.7 x median row of long setae and a row of much
shorter setae along anterior margin; marginal setae 68-74 in number, particularly dense at apex, the longest 3.7-3.8 x greatest width of wing. Hind wing (Fig. 22) 15-16 x as long as wide; disc notably infuscate, with 1 median row of long setae and a row of much shorter setae along anterior margin; longest marginal setae 4.3-4.6 x greatest width of wing. Petiole much wider than long. Gaster (Fig. 18) longer than mesosoma; ovipositor 1.6-1.7 x length of gaster, notably exserted beyond its apex (by about 0.25 x own length).

Measurements of the lectotype: Body: 763; head: 160; mesosoma: 258; petiole: 15; gaster: 337; ovipositor: 289. Antenna: radicle: 12; rest of scape: 109; pedicel: 45; F1: 19; F2: 22; F3: 24; F4: 24; F5: 24;

MALE (paralectotype). Body length 572. Similar to female except for the normal sexually dimorphic characters and the following. Antenna 13-segmented (Novicky 1965), with scape (without radicle) 3.7 x as long as wide; F1 (Fig. 23) about as long as wide, with 1 mps. Metasoma as in Fig. 24.

Diagnosis: Both sexes of Cleruchus megatrichus have dark brown bodies and the fore wing with dense marginal setae in the apical half and long discal setae of the median row (Figs 20, 21). Females have a relatively long ovipositor (1.6-1.7 x length of meta-
tibia) exserted beyond the gastral apex by about 0.25 x its own length (Fig. 18).

Distribution: Poland.

Hosts: Unknown.

**Cleruchus szelenyi Novicky, 1965**
(Figs 3, 7, 25–31)
Cleruchus sp.: Nowicki 1940: 646 (mentioned as a brachypterous new species).

Cleruchus detritus Bakkendorf 1964: 4–6 (in part, apterous "form" only).

Cleruchus szelenyi (sic) Novicky 1965: 58, 60 (in key). Type locality: Svábhegy [hill], Budapest, Hungary (according to the original description and also to Novicky 1940: 646 [as Cleruchus sp.] but on the labels on the syntypes probably the correct locality is indicated – Köhegy, Pomáz, Pest Co., Hungary.

Cleruchus detritus Bakkendorf: Novicky 1965: 59 (footnote, as "forma aptera", compared with C. janetscheki Novicky); Triapitsyn 1978: 531 (in part, apteroeus [as strongly brachypterous] females only; key, distribution).


**Type material examined:** Lectotype female of C. szelenyi Novicky [DEZA], here designated to avoid confusion regarding the status of the type specimens of this taxon, on slide (Fig. 7) labeled: 1. [the original label] "Pomáz: Köhegy 1937.V. dr. SZELENYI"; 2. [red, the original label] "Cribro collecta" (meaning "collected by sifting" in Latin; from lawn soil according to the original description); 3. [the original identification label for the entire type series] "Cleruchus szelenyi n.sp. Nov." 4. [on the original card, in blue ink] "♀"; 5. "Cleruchus szelenyi Novicky ♀ LECTOTYPE Det. by S. V. Triapitsyn 2011"; 6. "Remounted from dry liquid Faure at UCR/ERM by V. V. Berezovsky 2011 in Canada balsam". The lectotype specimen (Figs 25–

27) is in fair condition although it lacks F5, F6, and clava of one antenna, pedicel and F1-F3 of the other antenna, tibiae and tarsi of both fore legs, and the apical tarsomere of one hind leg; the original mount was as in Fig. 3. Paralectotypes: same label data as the lectotype except without Novicky’s labels, 2 females and 1 male [DEZA] on separate slides, remounted into Canada balsam from the similar original mounts (the male had "♂" marked in blue ink on the original card containing a coverslip mount insert but the females lacked any symbols marking their sex). All specimens are in rather poor condition, fragmented, and lacking some body parts (particularly, the male has only F1-F6 of one antenna and F1-F3 of the other antenna left).

Syntypes of C. detritus Bakkendorf: 11 apterous (conspecific with C. szelenyi) and 2 macropterous (belonging to a different species, considered here to be the true C. detritus females [MHNG] on 4 slides labeled and faintly numbered in pencil as one to four on both labels: 1. "Mymaridae: Cleruchus detritus Bkdf." and also "Type." on the second slide and "apt. form." on the third slide; 2. "Genève Chancy 23.v.61 lavage de terre Besuchet". Slide 1 has two apterous specimens and also one macropterous female, slide 2 has one apterous specimen and also one macropterous female (designated here as the lectotype of C. detritus to avoid confusion regarding the status of the type specimens of this taxon and also to define it properly), and slides 3 and 4 each have four apterous females. These specimens were labeled as, accordingly, the lectotype and paralectotypes of C. detritus; identification labels were also added to the slides indicating that the apterous paralectotype females are in fact C. szelenyi.

Redescription: **FEMALE (lectotype of C. sze-

lenyi).** Body and most of antenna dark brown (clava somewhat lighter), legs brown except tarsi light brown. Head (Figs 26, 27) flattened, slightly wider than long in dorsal view and slightly wider than mesosoma. Vertex large, trapezoidal, smooth; eye with about 5-7 ommatidia laterally in dorsal view; ocelli absent. Face subrectangular, small, almost smooth; torulus large, subtriangular, below lower level of eye. Antenna (Fig. 25) with scape faintly longitudinally striate; radicle small; remainder of scape 5.7 x as long as wide. Pedicel 1.9 x as long as wide, much longer than F1. F1-F5 more or less subequal in length and width but among them F1 the shortest and slightly wider than long, F3 slightly longer than wide, and F6 the longest and notably the broadest; F1-F5 without
Taxonomic notes on Cleruchu

mps and F6 apparently with 1 mps; clava a little longer than combined length of F3-F6, entire, 3.0 x as long as wide, apparently with 6 mps. Mesosoma (Fig. 27) mostly smooth. Pronotum large, divided mediolongitudinally; midlobe of mesoscutum with a pair of setae; scutellum small; propodeum short. Apterous. Petiole much wider than long; gaster (Fig. 27) notably longer than mesosoma; ovipositor 0.7 x length of metatibia and occupying about 0.3 x length of gaster, barely protruding beyond its apex.

Measurements of the lectotype of *C. szelenyi*: Body: 652; head: 121; mesosoma: 170; petiole: 12; gaster: 355; ovipositor: 100. Antenna: radicle: 10; rest of scape: 105; pedicel: 40; F1: 12; F2: 16; F3: 16; F4: 15(16); F5: 16; F6: 19; clava: 88.

Variation (paralectotypes of *C. szelenyi*). Body length 498-550. Relative lengths of funicle segments show significant intraspecific variability. Antenna either with F3 short, as long as wide in one female or with F2 and F3 clearly longer than wide in the other (Fig. 28); F6 apparently either with or without a mps; clava as long as combined length of F2-F6 in the former or slightly longer than combined length of F3-F6 in the latter specimen.

The better preserved apterous female paralectotype...
are rudimentary, with indistinct ommatidia), the female antenna has a short funicle, with F2-F5 usually more or less about as long as wide (Fig. 25) but occasionally F2 and F3 clearly longer than wide (Fig. 28).

Discussion: The entire syntype series of *C. detritus* was examined by the first author. Both “forms” of *C. detritus* were collected in Chancy, Canton of Geneva, Switzerland (Bakkendorf 1964) at a similar low elevation as the type series of *C. szelenyi*. *Cleruchus szelenyi* is identical to the aperturous “form” of *C. detritus* Bakkendorf (Bakkendorf 1964), which represents a separate species from its fully winged “form” because their antennae, as described and illustrated in the original description, are completely different: the female antenna of the aperturous “form” usually lacks mps on all funicle segments (except sometimes one mps apparently may be present on F6) whereas these are present on F3-F6 of the macropterous “form” of *C. detritus* which also has well-developed ocelli. The latter is a good species that will be redescribed and illustrated, based on the lectotype and one paratype which represents a separate species from its “form” of *C. detritus* because their antennae, as described and illustrated in the original description, are completely different: the female antenna of the apterous “form” of *C. detritus* usually lacks mps on all funicle segments (except sometimes one mps apparently may be present on F6) whereas these are present on F3-F6 of the macropterous “form” of *C. detritus* (Bakkendorf 1964), which also represents a separate species from its “form” of *C. detritus*. *C. pluteus* of the apterous “form” usually lacks mps on all funicle segments (except sometimes one mps apparently may be present on F6) whereas these are present on F3-F6 of the macropterous “form” of *C. detritus* (Bakkendorf 1964), which also represents a separate species from its “form” of *C. detritus*. *C. pluteus* differs from *C. detritus* (Bakkendorf 1964) in its antennae, as described and illustrated in the original description, are completely different: the female antenna of the aperturous “form” usually lacks mps on all funicle segments (except sometimes one mps apparently may be present on F6) whereas these are present on F3-F6 of the macropterous “form” of *C. detritus* (Bakkendorf 1964), which also represents a separate species from its “form” of *C. detritus*. *C. pluteus* differs from *C. detritus* (Bakkendorf 1964) in its antennae, as described and illustrated in the original description, are completely different: the female antenna of the aperturous “form” usually lacks mps on all funicle segments (except sometimes one mps apparently may be present on F6) whereas these are present on F3-F6 of the macropterous “form” of *C. detritus* (Bakkendorf 1964), which also represents a separate species from its “form” of *C. detritus*.


Comments: Some of these specimens were mentioned by Novicky (1965) as either *C. pluteus*, *C. ?pluteus*, or *C. sp. near pluteus*.

Acknowledgments. We thank Dr. Bernhard Merz for arranging a loan of material from MHING. Prof. Vladimir A. Triapitzyn (Moscow, Russia) kindly helped the first author with translation from German of the paper by Novicky (1965).

References


