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A Catalog of the World Xylomyidae (Insecta: Diptera)

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Introduction

The Xylomyidae are a small family of Stratiomyomorpha comprised of four genera and 138 described species. The family is found in all zoogeographic regions but is somewhat more prevalent in tropical forests. Although some species are fairly large and strikingly colored, particularly in the genus *Xylomya*, specimens remain uncommon in collections. Recently, more widespread use of Malaise traps has demonstrated that a number of species still await description, particularly in tropical regions.

Little is known about the life histories of xylomyids. Adults are generally found in wooded areas, and the larvae, as far as known, occur under bark of fallen or dying trees or, in some species of *Solva*, in roots (Krivosheina 1976). Very few larvae have been described, primarily from the Palaearctic fauna. It has been stated that the larvae of xylomyids are predaceous (Leonard 1930: 43), but this is unlikely. They are almost certainly scavengers similar to stratiomyid larvae, and are sometimes very abundant in a single tree.

There has been considerable inconsistency and confusion concerning the proper family-group name for the Xylomyidae. The situation was exacerbated by the paper of Nagatomi & Tanaka (1971), in which the name *Xylomya* Rondani was synonymized with *Solva* Walker. This was based on the fact that Rondani (1856: 172) had designated *Xylophagus varius* Meigen as type species for *Subula* Meigen, later replaced with *Xylomya* (Rondani 1861: 11). Nagatomi & Tanaka correctly recognized that *Xylophagus varius* was actually a member of the genus *Solva*, and did not fit the traditional generic concept of *Xylomya*. However, they incorrectly assumed that the family-group name should be based on the root of the oldest generic name (*Solva*), rather than the principle of priority in the family-group names themselves. Thus, they used the name Solvidae for the family, which dates from Enderlein (1913), rather than Xylomyidae, which dates from Verrall (1901) (see Sabrosky 1999). Clearly, Xylomyidae is the correct name for the family. Furthermore, the generic synonymy

by Nagatomi & Tanaka was incorrect, because the earliest type species designation for *Subula* was by Westwood (1840) of *Xylophagus maculatus* Meigen, which is a member of the traditional concept of *Xylomya*, as correctly pointed out by Krivosheina (1976).

Phylogeny and classification of the Xylomyidae

Little has been published on the phylogenetic relationships of the Xylomyidae. Woodley (1989) summarized character evidence for the monophyly of the family and the sister-group relationship of the Xylomyidae and Stratiomyidae, primarily based on larval features that were well documented in the literature. The larvae of the two families are so similar, and so different from anything else in the Diptera, that the xylomyids and stratiomyids have long been considered related, and have sometimes been considered a single family (e.g., Verrall 1909). Sinclair (1992) added further information on larval mouthpart structure, and hypothesized that Pantophthalmidae belonged in the Stratiomyomorpha, and were the sister-group to Xylomyidae + Stratiomyidae. Sinclair *et al.* (1994) provided further character evidence for these relationships from structures of the male terminalia.

Only the paper of Papavero & Artigas (1991) has discussed the cladistic relationships of the genera within the Xylomyidae. A paper by Nagatomi (1993) discussed some characters in the family, but not in a cladistic framework. Unfortunately, most of the observations of these authors (particularly in the first paper) were based on a limited number of species, so in some cases variation that exists was not noted.

In this section I am reviewing some characters from the literature as well as a few others that I have found to be cladistically informative. I have used an inferred groundplan approach for determining character polarities, using general knowledge of the characters within lower Brachycera. This work is quite preliminary, and discovery of males of critical species (e.g., species of *Solva* sometimes placed in a separate genus, *Formosolva,* and *Coenomyiodes edwardsi*) will be important in further refining our understanding of relationships in the Xylomyidae. In the following discussion, 0 is considered the plesiomorphic character state. Figure 1 presents a cladogram with character state distributions.

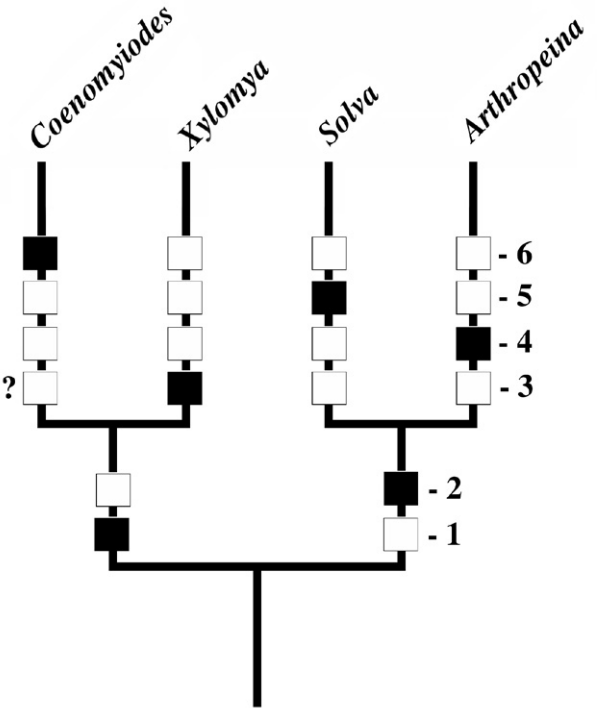

Fig. 1: Cladogram of genera of Xylomyidae. Character numbers are referred to in text. Open squares indicate character state 0, filled squares state 1.

Characters and their states

1. Number of palpal segments.

0 = two well-defined segments. A two-segmented palpus is considered a groundplan feature of the lower Brachycera (Woodley 1989). In *Solva* and *Arthropeina*, the first segment is usually slender and about one-third the length of the second segment, which is slender to ovoid and variably enlarged.

1 = basal segment reduced or absent. Species of *Xylomya* and *Coenomyiodes* have been considered to have a one-segmented palpus (Nagatomi & Tanaka 1971, Papavero & Artigas 1991). In most species I have examined, the one visible segment is narrow basally and enlarged in various shapes apically (e.g., Nagatomi & Tanaka 1971: figs. 3B, 5B). In a few larger species that I have examined, such as *Xylomya parens* (Williston) and *Coenomyiodes edwardsi* Brunetti, there appears to be a tiny basal seg-

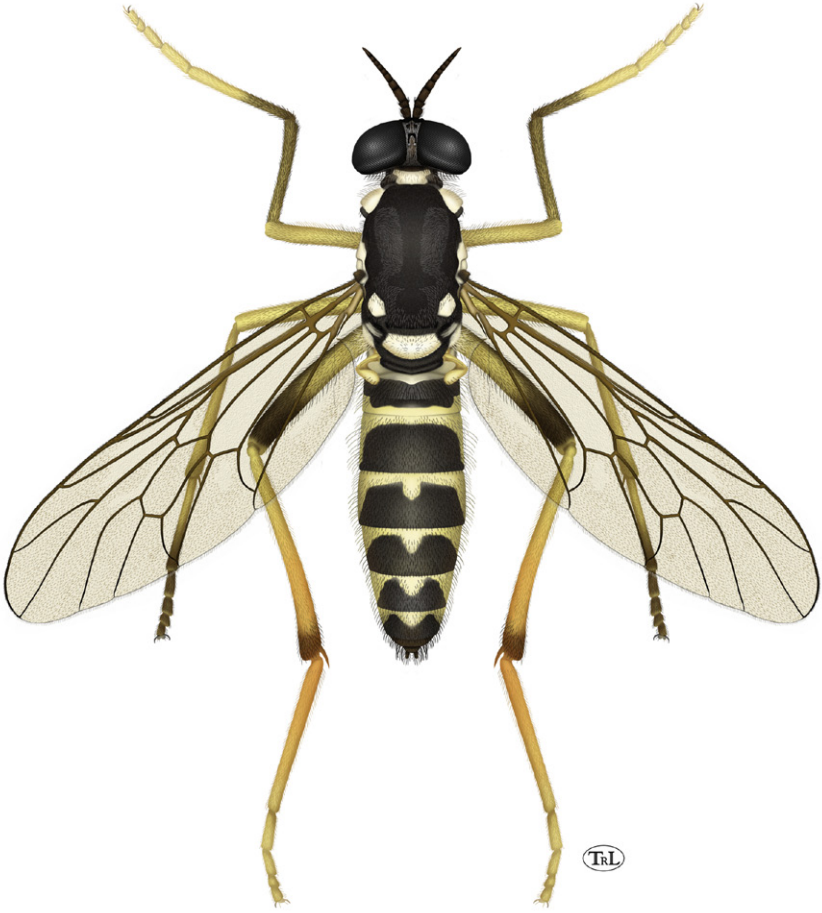

Fig. 2: *Xylomya* sp. (Costa Rica).

ment. A more detailed morphological study is needed to clarify the exact nature of this character state, but whether or not a small first segment is present, this character state can be considered apomorphic.

2. First abdominal tergite.

0 = unmodified, fully sclerotized. Species of *Xylomya* and *Coenomyiodes* have the first abdominal tergite essentially unmodified, with only a narrow strip of membrane at its anterior margin.

1 = modified, extensively membranous dorsally. In *Solva* and *Arthropeina*, the anterior margin of the first tergite is more or less semicircular,

with a large membranous patch (see Nagatomi & Tanaka 1971: fig. 1 for an excellent illustration of both states of this character). This morphological modification seems to be related to dorsal flexing of the abdomen. While the vast majority of species of *Solva* have this state, there are a few species in which this feature is only slightly or not developed, as noted by Daniels (1977). Species that I have seen that lack the typical state of this character are usually those that are elongate and show a tendency toward wasp mimicry, although a few have more typical *Solva* form. This character will have to be analyzed more fully within *Solva* after some of the cladistic relationships within the genus are known in order to understand this possible homoplasy.

3. Lateral margins of epandrium.

0 = unmodified. In *Solva* and *Arthropeina* the lateral margins of the epandrium are evenly rounded and unmodified (e.g., Nagatomi & Tanaka 1971: fig. 13F).

1 = with large, lateral processes. Males of *Xylomya* have the lateral margins of the epandrium produced into large processes (e.g., Nagatomi & Tanaka 1971: figs. 5F, 7F). This is true of species sometimes placed in the separate genera *Macroceromys* Bigot and *Nematoceropsis* Pleske. Unfortunately, the male is unknown for *Coenomyiodes edwardsi*. If it is found to have these lateral processes, it should be synonymized with *Xylomya*.

4. Terminal antennal flagellomere.

0 = unmodified. The terminal flagellomere in species of *Coenomyiodes, Xylomya,* and *Solva* is quite variable in length, but is not distinctly different in structure from the preceding flagellomeres, and is bluntly rounded to conically tapered apically. The vestiture may be different in color on the apical flagellomeres, but is otherwise similar to the preceding ones.

1 = style-like, strongly tapered apically. In all known species of *Arthropeina*, the apical flagellomere is sharply tapered from base to apex, becoming strongly narrowed and style-like (Lindner 1949: fig. 3). The vestiture of this flagellomere is longer and more obvious. Occasionally the small, penultimate flagellomere has a similar vestiture. The basal six flagellomeres are more tightly appressed forming a small, conical complex.

5. Ventral surface of hind femur.

0 = smooth, unarmed. All known species of *Coenomyiodes, Xylomya,* and *Arthropeina* have the ventral surface of the hind femur without a row of tubercles. Generally the hind femur is slender, not differing from the other femora.

1 = armed with peg-like tubercles. All known species of *Solva* have a longitudinal array of small peg-like tubercles on the ventral surface of the hind femur. Occasionally these are quite small. This has led to erroneous statements that *Solva varia* is without these tubercles (e.g., Nagatomi 1993: 88). They are, however, present in *S. varia*, although they are small and more difficult to observe because they are not contrastingly black as in many other species of *Solva*. Species sometimes placed in the segregate genera *Ceratosolva* de Meijere and *Formosolva* James also have these denticles. Often the hind femur is enlarged in species of *Solva*, but not universally.

6. Portion of M_3 closing cell m_3.

0 = slightly arcuate. All xylomyids except *Coenomyiodes* have the portion of vein M_3 closing cell m_3 only slightly arcuate, with the basal half being nearly straight.

1 = strongly arcuate. *Coenomyiodes* has the portion of vein M_3 closing cell m_3 more strongly arcuate. This gives the apical portion of cell m_3 a more rounded appearance.

A few characters discussed by Papavero & Artigas (1991) and used by them cladistically need further clarification here. Two wing venational characters that they used (extent of costal vein, and presence or absence of crossvein m-cu) are variable. I have seen species of *Solva* in which the costa extends at least weakly to M_2 (e.g., *S. freyi* Nagatomi) and species of *Xylomya* (e.g., *X. simillima* Steyskal) in which the costa is quite weak beyond M_1. The presence or absence of crossvein m-cu is variable in both *Solva* and *Arthropeina*. The observations of Papavero & Artigas were based on examination of very few species, so that the extent of variation was overlooked.

Papavero & Artigas were the first authors to provide detailed illustrations of the internal anatomy of the female reproductive structures in Xylomyidae. This system shows good promise for characters of cladistic importance. They considered a large, membranous sac on a short duct to be a third, modified spermatheca in *Xylomya*. It is quite different in structure from the two sclerotized spermathecae, and I think further research is necessary to determine if this structure could be an accessory gland. Liu & Nagatomi (1994) reported the same basic anatomy for several species of *Xylomya* and *Solva* from Japan. I found a similar condition in an undescribed species of *Arthropeina*, so the membranous sac is not limited to *Xylomya*. I think it is possible that the small, blind duct illustrated by Papavero & Artigas (1991: fig. 9) for *Arthropeina* could be a ruptured sac. Also in the

Arthropeina I examined, the spermatheca was a simple, globular structure, not showing the "layers" that Papavero & Artigas found in *A. fulva*. The shape of the spermatheca itself in *Solva* is quite variable. I have examined a Central American species in which the spermatheca looks like a double corkscrew. Clearly the variation found in these structures would be a fruitful area for future study.

Key to World genera of Xylomyidae

1. Hind femur armed with many tubercles on ventral surface .... *Solva* Walker
   Hind femur without tubercles on ventral surface 2
2. Antennal flagellum with apical 2 flagellomeres discretely set off from remainder of flagellum, black, forming a weakly differentiated style, more coarsely pubescent than basal flagellomeres; last flagellomere slender, at least twice as long as penultimate flagellomere (usually much more), conically tapered to a sharp apex; male epandrium without surstyli; known only from the Neotropical Region..... *Arthropeina* Lindner
   Antennal flagellum with apical 2 flagellomeres not distinctly different from basal ones, variably colored, not at all stylate; last flagellomere not slender, much less than twice as long as penultimate flagellomere, conical to nearly cylindrical 3
3. Portion of M_3 closing cell m_3 strongly arcuate; male epandrium unknown; large robust flies about 20 mm in length; known only from northern India and Nepal ..... *Coenomyiodes* Brunetti
   Portion of M_3 closing cell m_3 weakly arcuate, the basal half of this vein segment nearly straight; male epandrium with distinct lateral processes; smaller, less robust flies almost always less than 20 mm in length..... *Xylomya* Rondani

Discussion of recognized genera

Arthropeina Lindner. *Arthropeina* is easily recognized by the distinctive, apomorphic antennal flagellum (character 4). It is possible that the structure of the spermathecal ducts illustrated by Papavero & Artigas (1991: fig. 9), with their peculiar valve-like structures at the posterior ends, is also apomorphic for the genus. Only one species is described, from southeastern

Brazil. However, I have seen at least 15 undescribed species ranging as far north as Costa Rica, including several from Ecuador and Peru. I suspect that intensive Malaise trap sampling in other areas will reveal numerous additional species. All species I have seen except one are predominantly yellow in color rendering their general appearance quite distinct from *Solva*.

Nothing has been published on the biology of this genus. I collected a female of an undescribed species on the trunk of a large fallen tree at Barro Colorado Island, Panama. Presumably the biology of *Arthropeina* is similar to that of *Solva*.

Coenomyiodes Brunetti. This genus is known from only three or four female specimens of *C. edwardsi* Brunetti from India and Nepal. The single apomorphy I have used to diagnose the genus (character 6) could easily be diagnostic at a lower level. The general appearance of this species is like a large, robust *Xylomya*. Nagatomi (1993) alluded to possible synonymy with *Xylomya*. I strongly suspect that when males are discovered this will be confirmed.

Few specimens of this genus have been collected so there is nothing known about its biology.

Solva Walker. *Solva* is easily recognized by the distinct tubercles found on the ventral side of the hind femora, autapomorphic for the genus. It is also possible that the very elongate spermathecal ducts (see Papavero & Artigas 1991: figs. 5, 6) are autapomorphic, but this needs to be confirmed in additional species of *Solva* as well as compared to more species in other xylomyid genera.

Yang & Nagatomi (1993) recognized *Formosolva*, known only from females, at the generic level. However, in my opinion the characters they cite (placement of lateral ocelli, shape of tentorial pits) are probably derived for a small group of species within *Solva*, since these species possess femoral tubercles. These flies are elongate, yellow species with long antennae that are probably wasp mimics. *Ceratosolva* de Meijere is also based on a few species of *Solva* that are slightly more elongate than is typical in the genus, with elongate antennae. It was recognized by Frey (1960), but not by subsequent authors.

Solva is by far the largest genus in the family, with 96 described species from all zoogeographic regions. The genus is very poorly known in both the Oriental and Neotropical Regions, where there are certainly a number of undescribed species.

In the Nearctic Region, larvae have been described for the two most widespread species in the region (Webb 1984). Larvae of *Solva pallipes*

(Loew), by far the most common species in the region, have been collected under bark of a variety of hardwood trees. Larvae of *S. crepuscula* Hull were collected under bark of a *Liriodendron* tree (Webb 1984). I have collected adults of this species that were attracted to a fallen *Liriodendron*, so perhaps this is a favored host.

Immature stages of *Solva* are best known in the Palaearctic Region (Rozkošný 1973, Krivosheina 1976). Most species have been recorded from under bark of various hardwoods as in the Nearctic Region, but Krivosheina (1976) reported *S. schnitnikowi* from roots of *Ferula* (Apiaceae).

The biology of tropical species is poorly known. I have seen specimens of an unidentified *Solva* from the Philippines (USNM) that were reared from breadfruit (*Atrocarpus communis* Forst.).

Xylomya Rondani. *Xylomya* contains relatively large flies with very distinctive male terminalia. The lateral processes of the epandrium are autapomorphic. The enlarged male cerci may also be apomorphic for the genus.

Two additional genera have been recognized by some recent authors, but clearly have the apomorphic features that characterize *Xylomya*. *Nematoceropsis* was considered valid by Krivosheina (1988), although it was confusingly synonymized with *Macroceromys*. The two included species (*X. longicornis* and *X. matsumurai*) have typical *Xylomya* terminalia, but antennae that are more elongate than found in other Palaearctic *Xylomya*. Nagatomi (1993) noted that this distinction was insignificant. *Macroceromys* Bigot, based on a Mexican species, has been used as a valid generic name, but usually because of confusion of synonymy (see Introduction) rather than on zoological grounds. Bigot's species has the autapomorphies diagnostic of *Xylomya*, but differs in having elongate antennae with only seven flagellomeres. There are several additional undescribed species ranging from Mexico to Panama in this species group. They all appear to be ichneumonid mimics, but as suggested by Nagatomi (1993), the group does not warrant generic recognition.

Xylomya is most diverse in the Palaearctic Region, especially China and Japan. It is absent from the Australian and Afrotropical Regions. The genus is poorly studied in the Neotropical Region, from where I have seen perhaps a dozen undescribed species ranging from Mexico to Peru.

The known biology of *Xylomya* is similar to other genera in the family. Immature stages have only been described for several Palaearctic species (Rozkošný 1973, Krivosheina 1976), and they were all collected under bark of various hardwood trees.

Table of genera

The following table lists the genera of Xylomyidae in the order found in the catalog, with a summary of the number of described species known in each zoogeographic region. The number in the total column can be less than the sum of those in individual regions if a species is known from more than one region.

Taxon	Distribution						
	NE	NT	PA	AF	OR	AU	Total
Arthropeina Lindner, 1949		1					1
Coenomyiodes Brunetti, 1920					1		1
Solva Walker, 1859	5	7	23	6	58	10	100
Xylomya Rondani, 1861	8	3	23		3		36
Totals	13	11	46	6	62	10	142

Arrangement and format of the catalog

This catalog was produced in the same manner, and often concurrently, with my catalog of the Stratiomyidae (Woodley 2001: 3). I have not included family-group names except as classification headings, because these were very recently covered in great detail by Sabrosky (1999). All literature was checked in the original. My methods for dating publications, libraries visited, and other bibliographic procedures are also the same as for my stratiomyid catalog (Woodley 2001: 351).

Genus-group names. For each recognized genus in the Xylomyidae all genus-group names proposed are cataloged, with the valid name given in boldface type. I have included both original and subsequent incorrect spellings, but I have not made an exhaustive search of the literature for the latter, but recorded them when they were detected.

Species-group names. For each species of Xylomyidae recognized as valid, the currently accepted valid name is given at the beginning of each entry in bold, followed by the author's name. This is followed on the same line by a general distribution summary for the known range of the species. These ranges are summarized at the country level, with a few exceptions in which states or provinces are included parenthetically (e.g., Australia, Mexico, USA). I have arranged the distributions by zoogeographic region, and have made some pragmatic decisions about some geographic entities.

Listed under the general catalog entry line, I have given all names that have been proposed that apply to that species. These are given in their original combination, using entirely original spelling, even if it does not agree in gender with the original generic name. These names are listed in chronological order with the author and reference. As with genus-group names, I have included both original and subsequent incorrect spellings, but again have not searched specifically for the latter category of errors.

For each proposed name for which type material is applicable, I have given the type status based on original and subsequent publications, the sex(es) of the material if determinable, the institution(s) where the material is deposited, and the type locality or localities. Type localities restricted or changed by lectotype designations are given based on published information or my own research. Geographic names for type localities have been modernized wherever possible, but occasionally are given within quotation marks if I could not interpret the locality unambiguously. Since there are a number of possible combinations for listing the status of type material, I am listing the notation I have used with brief explanation.

HT ♂: A holotype either proposed specifically or can be determined because the author only saw a single specimen, with known sex.

HT A: A holotype based on the above criteria, an adult specimen, but for which the sex cannot be determined from the literature. If examined, the specimen is so badly damaged that its sex cannot be determined.

LT ♂: A lectotype validly designated, with known sex. The reference to the lectotype designation is given following the acronym for depository.

ST 2♂, 1♀: Syntypes are known for which a specific number of males and/or females can be determined.

ST 2♂, ♀: Syntypes are known for which a specific number of one sex can be determined, but the number of the other sex cannot be determined from available information.

ST ♂♀: Syntypes of both sexes (or a single sex if only one symbol is given) are known, but their number cannot be determined from available information.

ST A: Syntypes are known to be adult specimens but numbers and sexes cannot be determined from available information.

As far as possible, institutions in which types are deposited have been cited. This information has been garnered from the literature, from correspondence with curators, published type lists, and my own museum work. In cases where type material is known to be destroyed, this is indicated. In cases where type material has not been located in a particular museum where it is supposed to reside, it is indicated as "not found". The acronyms used for these institutions are given below. In those cases where some specific information on a particular collection has been used, I have cited the source.

AMNH	Department of Entomology, American Museum of Natural History, New York, New York, USA (examined)
AMS	Entomology Section, The Australian Museum, Sydney, Australia (Daniels 1978)
ANSP	Department of Entomology, The Academy of Natural Sciences, Philadelphia, Pennsylvania, USA (examined)
BAUC	Department of Entomology, China Agricultural University, Beijing, China
BMNH	Department of Entomology, The Natural History Museum, London, England (examined)
CAS	Department of Entomology, California Academy of Sciences, San Francisco, California, USA (Arnaud 1979; internet site)
CNC	Canadian National Collection of Insects, Arachnids and Nematodes, Biological Resources Program, Agriculture Canada, Ottawa, Ontario, Canada (examined; internet site)
CSIRO	Division of Entomology, CSIRO, Canberra, Australia
CUI	Department of Entomology, Cornell University, Ithaca, New York, USA
DEI	Deutsches Entomologisches Institut, Müncheberg, Germany (Rohlfien & Ewald 1979)
EUMJ	Entomological Laboratory, Ehime University, Matsuyama, Japan
HNHM	Zoological Department, Hungarian Natural History Museum, Budapest, Hungary
HUS	Entomological Institute, Hokkaido University, Sapporo, Japan
IEME	Institute for Evolution, Morphology, and Ecology of Animals, Moscow, Russia
INHS	Illinois Natural History Survey, Champaign, Illinois, USA (Webb 1980)
KU	Entomological Laboratory, Kyushu University, Fukuoka, Japan

MCZ	Department of Entomology, Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA (examined)
MNHNP	Laboratoire d'Entomologie, Muséum National d'Histoire Naturelle, Paris, France (examined)
MZB	Museum Zoologicum Bogoriense, Bogor, Indonesia
NMB	Abteilung Entomologie, Naturhistorisches Museum Basel, Basel, Switzerland
NMW	II. Zoologische Abteilung (Insekten), Naturhistorisches Museum, Vienna, Austria
PAN	Museum of the Institute of Zoology, Polish Academy of Science, Warsaw, Poland
RNH	Nationaal Natuurhistorisch Museum, Leiden, The Netherlands (de Jong 2000)
SCI	Laboratory of Taxonomy and Ecology, Institute of Entomology, Academia Sinica, Shanghai, China
SEMC	Snow Entomological Museum, Department of Entomology, University of Kansas, Lawrence, Kansas, USA (Byers *et al.* 1962)
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Germany
UCD	Bohart Museum of Entomology, Department of Entomological Sciences, University of California, Davis, California, USA
UMMZ	Museum of Zoology, University of Michigan, Ann Arbor, Michigan, USA
UMO	Hope Entomological Collections, The University Museum, Oxford University, Oxford, England (examined)
USNM	Department of Systematic Biology, Entomology Section, Smithsonian Institution, Washington, DC, USA (examined)
UZMH	Zoological Museum, Finnish Museum of Natural History, University of Helsinki, Helsinki, Finland
ZMAN	Zoologisch Museum, Instituut voor Taxonomische Zoologie, Universiteit van Amsterdam, Amsterdam, The Netherlands (de Jong 2000)
ZISP	Zoological Institute, Academy of Sciences, St. Petersburg, Russia (Krivosheina *et al.* 1984)
ZMHU	Zoologisches Museum an der Humboldt-Universität, Berlin, Germany
ZMM	Zoological Museum, Moscow State University, Moscow, Russia
ZSI	Zoological Survey of India, Calcutta, India

Taxonomic changes

NEW SPECIES-GROUP SYNONYMIES

Xylomyia gigas Enderlein, 1921 = *Coenomyiodes edwardsi* Brunetti, 1920**.**

Solva schnitnikowi brunneola Krivosheina, 1999 = *Solva schnitnikowi* Pleske 1928.

NEW COMBINATIONS

Solva devexifrons (Yang & Nagatomi), from *Formosolva* James.

Solva planifrons (Yang & Nagatomi), from *Formosolva* James.

Solva tuberifrons (Yang & Nagatomi), from *Formosolva* James.

NEW CHANGES IN STATUS

Solva flavomaculata (Leonard), resurrected from synonymy.

Xylomya tuvensis Krivosheina, raised to species level.

Catalog

Genus ARTHROPEINA Lindner

Arthropeina Lindner, 1949: 789. Type species, *Arthropeina fulva* Lindner, by monotypy.

fulva Lindner. **Neotropical:** Brazil.

Arthropeina fulva Lindner, 1949: 790. LT ♂ BMNH [des. Woodley (1999: 201)]. Brazil. Santa Catarina: Nova Teutônia.

Genus COENOMYIODES Brunetti

Coenomyiodes Brunetti, 1920: 110. Type species, *Coenomyiodes edwardsi* Brunetti, by original designation. Correct original spelling, by present revision.

Coenomyioides. Incorrect original spelling. Brunetti 1920: explanation to plate II.

Cenomyiodes. Incorrect subsequent spelling. Papavero & Artigas 1991: 104.

edwardsi Brunetti. **Oriental:** India, Nepal.

Coenomyiodes edwardsi Brunetti, 1920: 111. HT ♀ BMNH. India. Assam: Khasi Hills.

Xylomyia gigas Enderlein, 1921: 168. HT ♀ HNHM [destroyed]. Nepal (as "Nord-Indien"). Himalaya: Mount Everest. **NEW SYN-**

ONYMY. Note: It is quite clear from Enderlein's (1921) original description that his *Xylomyia gigas* is the same as *Coenomyiodes edwardsi*. I have examined specimens from Nepal and Sikkim, India, both of which are fairly close to Enderlein's type locality, in addition to Brunetti's holotype.

Genus SOLVA Walker

Solva Walker, 1859: 98. Type species, *Solva inamoena* Walker, by monotypy.

Subulonia Enderlein, 1913: 545. Type species, *Subulonia truncativena* Enderlein, by original designation.

Prista Enderlein, 1913: 546. Type species, *Subula vittata* Doleschall, by original designation.

Ceratosolva de Meijere, 1914: 21. Type species, *Ceratosolva cylindricornis* de Meijere, by monotypy.

Pararthropeas Brunetti, 1920: 108. Type species, *Pararthropeas thereviformis* Brunetti, by original designation.

Hanauia Enderlein, 1920: 281. Type species, *Xylophagus marginatus* Meigen, by designation of Enderlein (1921: 170) from first included species in the same paper.

Hanavia. Incorrect subsequent spelling. Brunetti 1923: 165.

Formosolva James, 1939: 32. Type species, *Solva concavifrons* James, by original designation. Described as subgenus of *Solva*.

Salva. Incorrect subsequent spelling. Ôuchi 1943: 486.

Phloophila Hull, 1945: 263. Type species, *Subula pallipes* Loew, by original designation. Described as subgenus of *Solva*.

apicimacula Yang & Nagatomi. **Palaearctic:** China (Sichuan).

Solva apicimacula Yang & Nagatomi, 1993: 17. HT ♀ BAUC. China. Sichuan: Emeishan, 1800 m.

atrata Daniels. **Australian:** Papua New Guinea (Papua New Guinea).

Solva atrata Daniels, 1977: 456. HT ♂ AMS. Papua New Guinea. Papua New Guinea: Musgrave River, Port Moresby.

aurifrons James. **Oriental:** Taiwan.

Solva (Ceratosolva) aurifrons James, 1939: 31. HT ♀ DEI. Taiwan. Toa Tsui Kutsu.

aurolimbata (Lindner). **Afrotropical:** Ghana, Malawi, South Africa, Sudan.

Hanauia aurolimbata Lindner, 1935: 292. HT ♀ BMNH. Ghana. Accra.

Hanauia tibialis Lindner, 1938a: 67. ST 1♂ BMNH, 1♀ SMNS. Sudan. De Lami N.M.P.; ST 1♀ BMNH. Malawi.

basalis Frey. **Oriental:** Myanmar.

Solva basalis Frey, 1960: 14. ST 2♀ UZMH. Myanmar. Kambaiti, 2000 m.

basiflava Yang & Nagatomi. **Oriental:** China (Yunnan).

Solva basiflava Yang & Nagatomi, 1993: 24. HT ♂ BAUC. China. Yunnan: Baoshan, 1630 m.

Solva basiflora. Incorrect subsequent spelling. Zoological Record 1994: 306 [attributed to Yang & Nagatomi].

bergi James. **Australian:** Solomon Islands.

Solva bergi James, 1951: 149. HT ♂ USNM. Solomon Islands. Guadalcanal Island.

binghami Enderlein. **Oriental:** India.

Solva binghami Enderlein, 1921: 169. HT ♂ ZMHU. India. Sikkim.

brasiliana (Lindner). **Neotropical:** Brazil.

Subulonia brasiliana Lindner, 1949: 791. ST 2♂ BMNH. Brazil. Santa Catarina: Nova Teutônia.

cabrerae (Becker). **Palaearctic:** Spain (Canary Islands).

Xylomyia cabrerae Becker, 1908: 11. ST 2♀ ZMHU. Spain. Canary Islands: Tenerife.

Solva caprerae. Incorrect subsequent spelling. Kühbandner 1995: 421.

caffra (Bigot). **Afrotropical:** Sierra Leone, South Africa, Zimbabwe.

Subula caffra Bigot, 1879: 195. ST 2♀ BMNH. Sierra Leone.

caiusi Séguy. **Oriental:** India.

Solva caiusi Séguy, 1956: 174. HT ♀ MNHNP. India. Madras: Trichinopoly.

calopodata (Bigot). **Oriental:** India, Indonesia (Sumatra), Malaysia, Philippines. **Australian:** Indonesia (Maluku).

Subula calopodata Bigot, 1879: 195. HT ♀ BMNH. Indonesia. Maluku: Ternate.

clavata Yang & Nagatomi. **Palaearctic:** China.

Solva clavata Yang & Nagatomi, 1993: 26. HT ♂ BAUC. China.

completa (de Meijere). **Palaearctic:** China (Sichuan). **Oriental:** China (Yunnan), Indonesia (Java).

Xylomyia completa de Meijere, 1914: 23. HT ♀ ZMAN. Indonesia. Java: Gunung Ungaran.

Solva crassifemur Yang & Nagatomi, 1993: 29. HT ♂ BAUC. China. Sichuan: Emeishan Mountain, 1120 m. Syn. Rozkošný & Kovac 1996: 289.

concavifrons James. **Oriental:** Taiwan.

Solva (Formosolva) concavifrons James, 1939: 32. HT ♀ DEI. Taiwan.

confusa Hollis. **Oriental:** Myanmar.

Solva confusa Hollis, 1963: 557. HT ♀ BMNH. Myanmar. Chin Hills, Mt. Victoria, 4200 ft.

crepuscula Hull. **Nearctic:** Canada (Ontario), USA (Connecticut, District of Columbia, Florida, Illinois, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, New Hampshire, Pennsylvania, Virginia, West Virginia).

Solva (Phloophila) crepuscula Hull, 1945: 263. HT ♂ CNC. USA. Mississippi: Oxford.

cylindricornis (de Meijere). **Oriental:** Indonesia (Java), Malaysia.

Ceratosolva cylindricornis de Meijere, 1914: 22. ST 1♀ ZMAN. Indonesia. Java: Buitenzorg (=Bogor); ST 1♂ RNH, 1♂ ZMAN. Indonesia. Java: Gunung Ungaran; ST 1♀ ZMAN. Indonesia. Java: Nusa Kambangan.

decora Webb. **Nearctic:** Mexico (Coahuila, Durango, México), USA (Arizona, New Mexico). **Neotropical:** Costa Rica.

Solva decora Webb, 1984: 276. HT ♂ UCD. Mexico. México: Valle de Bravo.

devexifrons (Yang & Nagatomi). **NEW COMBINATION. Palaearctic:** China (Sichuan).

Formosolva devexifrons Yang & Nagatomi, 1993: 6. HT ♀ BAUC. China. Sichuan: Emeishan Mountain, 1120 m.

doleschalli Frey. **Oriental:** Indonesia (Java).

Solva doleschalli Frey, 1934: 301. ST 1♂, 1♀ RNH and/or ZMAN. Indonesia. Java: Gunung Pantjar near Buitenzorg. Frey provided a "new name" for the species of *Solva* that de Meijere (1911: 260) recorded under *S. vittata* from Java.

dorsiflava Yang & Nagatomi. **Oriental:** China (Yunnan).

Solva dorsiflava Yang & Nagatomi, 1993: 31. HT ♀ BAUC. China. Yunnan: Ruili.

fascipennis (de Meijere). **Oriental:** Indonesia (Sumatra), Malaysia.

Ceratosolva fascipennis de Meijere, 1919: 21. ST 1♀ ZMAN. Indonesia. Sumatra: Suban Ajam.

flavicoxis (Enderlein) **Nearctic:** Mexico (Morelos). **Neotropical:** Brazil, Mexico (Guerrero, Oaxaca), Paraguay.

Hanauia flavicoxis Enderlein 1921: 172. HT ♀ ZMHU. Paraguay. San Bernardino.

flavipes (Doleschall). **Oriental:** India, Philippines. **Australian:** Indonesia (Maluku), Papua New Guinea (Papua New Guinea).

Subula flavipes Doleschall, 1859: 85. ST A NMW [?]. Indonesia. Maluku: Ambon.

Solva flaviceps. Incorrect subsequent spelling. Enderlein 1921: 169.

flavipilosa Yang & Nagatomi. **Oriental:** China (Yunnan).

Solva flavipilosa Yang & Nagatomi, 1993: 32. HT ♂ BAUC. China. Yunnan: Xishuangbanna, 750 m.

flavomaculata (Leonard). **NEW STATUS. Neotropical:** Mexico (Yucatan).

Xylomyia pallipes var. *flavomaculata* Leonard, 1930: 43. HT ♂ AMNH. Mexico. North Yucatan. Note: Webb (1984: 278) synonymized *Xylomyia pallipes* var. *flavomaculata* with *Hanauia flavicoxis* Enderlein, which was described from Paraguay. Given the number of undescribed *Solva* in the Neotropics, and the fact that Webb did not provide data justifying his synonymy, I prefer to maintain the two taxa as distinct pending more detailed revision.

flavoscutellaris (Matsumura). **Palaearctic:** Japan.

Xylomyia flavoscutellaris Matsumura, 1915: 46. ST ♂♀ HUS. Japan. Hokkaido: "Sahoro".

floresensis Frey. **Oriental:** Indonesia.

Solva javana var. *floresensis* Frey, 1934: 300. HT ♀ NMB. Indonesia. Flores: Endeh-Todabeloe.

formosipes Frey. **Oriental:** Myanmar.

Solva formosipes Frey, 1960: 13. ST 1♂, 3♀ UZMH. Myanmar. Kambaiti, 2000 m.

freyi Nagatomi. **Oriental:** Myanmar, Nepal.

Solva fascipennis Frey, 1960: 12. ST 2♀ UZMH. Myanmar. Kambaiti, 1800 m; ST 3♀ UZMH. Myanmar. Kambaiti, 2000 m. Preoccupied, secondary homonym of *Ceratosolva fascipennis* de Meijere 1919.

Solva freyi Nagatomi, 1975: 12. New name for *Solva fascipennis* Frey.

furcicera Adisoemarto. **Oriental:** Indonesia (Kalimantan).

Solva furcicera Adisoemarto, 1973: 35. HT ♂ MZB. Indonesia. Kalimantan: Bengen River, Tabang, 125 m.

gracilifemur (Lindner). **Afrotropical:** Uganda.

Hanauia gracilifemur Lindner, 1939: 2. ST 1♀ BMNH, 1♀ SMNS. Uganda. Ruwenzori, Fort Portal; ST 1♀ BMNH. Uganda. Ruwenzori: Namwamba Valley, 6500 ft.

gracilipes Yang & Nagatomi. **Palaearctic:** China (Sichuan).

Solva gracilipes Yang & Nagatomi, 1993: 34. HT ♀ BAUC. China. Sichuan: Emeishan Mountain, 760 m.

harmandi Séguy. **Palaearctic:** Japan, Russia.

Solva harmandi Séguy, 1956: 175. ST 2♂, 5♀ MNHNP. Japan. Honshu: "Tokyo vicinus et Nikko alpes".

Solva umbrosa Krivosheina, 1972: 74. HT ♂ ZISP. Russia. Primorskiy kray: Suputinskiy (Ussurijskiy) zapovednik. Syn. Krivosheina 1976: 127.

hubensis Yang & Nagatomi. **Palaearctic:** China (Hubei).

Solva hubensis Yang & Nagatomi, 1993: 36. HT ♀ BAUC. China. Hubei: Wudangshan Mountain, 1100 m.

hybotoides Walker. **Australian:** Indonesia (Maluku).

Solva hybotoides Walker, 1861: 5. ST ♂ (not found), 1♀ BMNH. Indonesia. Maluku: Halmahera.

ichneumonea (Frey). **Oriental:** Myanmar.

Ceratosolva ichneumonea Frey, 1960: 8. HT ♀ UZMH. Myanmar. Kambaiti.

ichneumoniformis Enderlein. **Oriental:** Indonesia (Sumatra).

Solva ichneumoniformis Enderlein, 1913: 544. ST 5♂, 2♀ PAN. Indonesia. Sumatra: Soekaranda.

illustris Frey. **Oriental:** Myanmar.

Solva illustris Frey, 1960: 13. ST 1♂, 3♀ UZMH. Myanmar: Kambaiti, 2000 m.

inamoena Walker. **Oriental:** Indonesia (Sulawesi), Sri Lanka.

Solva inamoena Walker, 1859: 98. LT ♂ UMO [des. Woodley (1999: 202)]. Indonesia. Sulawesi: Ujung Pandang (as "Makessar").

inconspicua (Brunetti). **Oriental:** Thailand.

Xylomyia inconspicua Brunetti, 1923: 171. HT ♀ BMNH. Thailand. Phrapatoon.

intermedia (Brunetti). **Oriental:** India.

Xylomyia intermedia Brunetti, 1923: 173. HT ♀ ZSI. India. Naini Tal: Kumaon, 6000 ft.

japonica Frey. **Palaearctic:** Japan, Russia (Sakhalin).

Solva japonica Frey, 1960: 15. HT ♂ UZMH. Japan. Honshu: Karuizawa.

javana (de Meijere). **Oriental:** Indonesia (Java).

Xylomyia javana de Meijere, 1907: 218. ST 2♀ ZMAN. Indonesia. Java: Semarang.

kambaitiensis Frey. **Oriental:** Myanmar.

Solva kambaitiensis Frey, 1960: 13. HT ♀ UZMH. Myanmar. Kambaiti, 2000 m.

kinabalu Woodley. **Oriental:** Malaysia.

Solva kinabalu Woodley, 2004: 900. HT ♂ BMNH. Malaysia. Borneo: Sabah, Mount Kinabalu, Mesilau Trail.

kusigematii Yang & Nagatomi. **Oriental:** China (Guangxi, Zhejiang).

Solva kusigematii Yang & Nagatomi, 1993: 38. HT ♂ BAUC. China. Guangxi: Jinxiu.

laeta Daniels. **Australian:** Papua New Guinea (Papua New Guinea), Australia (Queensland).

Solva laeta Daniels, 1977: 456. HT ♂ AMS. Australia. Queensland: Mulgrave River, 2.5 km west of Gordonville.

longicornis Enderlein. **Oriental:** Indonesia (Sumatra).

Solva longicornis Enderlein, 1913: 543. ST 1♂ PAN. Indonesia. Sumatra: Soekaranda; 1♀ PAN. Indonesia. Sumatra: Liangagas.

lugubris Szilády. **Palaearctic:** Azerbaijan.

Solva lugubris Szilády, 1941: 88. HT ♀ HNHM [destroyed]. Azerbaijan. "Kaukasus, Kussari".

luzonensis (Enderlein). **Oriental:** Philippines.

Hanauia luzonensis Enderlein, 1921: 172. ST 4♀ ZMHU. Philippines. Luzon: Altimonan.

macroscelis (Speiser). **Afrotropical:** Tanzania.

Xylomyia macroscelis Speiser, 1923: 94. HT ♀ UNK. Tanzania. "Virgin forest behind border mountains of NW Lake Tanganyika", 1600-2200 m.

maindroni Séguy. **Oriental:** Indonesia (Sumatra).

Solva maindroni Séguy, 1946: 32. HT ♂ MNHNP. Indonesia. Sumatra: Bengkalis.

maniema Speiser. **Afrotropical:** Tanzania.

Solva maniema Speiser, 1923: 95. HT ♀ UNK. Tanzania. "N. W. Tanganjika".

marginata (Meigen). **Palaearctic:** Andorra, Austria, Belgium, Bulgaria, France, China, Czech Republic, Denmark, France, Germany, Great Britain, Hungary, Italy, Mongolia, Netherlands, Poland, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Ukraine.

Xylophagus marginatus Meigen, 1820: 15. LT ♂ MNHNP [des. Woodley (1999: 202)]. France: "bei Avignon an der Durance" or Austria.

mediomacula Yang & Nagatomi. **Palaearctic:** China (Sichuan).

Solva mediomacula Yang & Nagatomi, 1993: 41. HT ♀ BAUC. China. Sichuan: Emeishan Mountain, 1800-2000 m.

meijerei Nagatomi. **Oriental:** Indonesia (Sumatra).

Solva nigriventris de Meijere, 1924: 12. HT ♀ ZMAN. Indonesia. Sumatra: Gunung Talamau. Preoccupied, secondary homonym of *Xylomyia nigriventris* Brunetti.

Solva meijerei Nagatomi, 1975: 12. New name for *Solva nigriventris* de Meijere.

melanogaster Daniels. **Australian:** Papua New Guinea (Papua New Guinea).

Solva melanogaster Daniels, 1977: 455. HT ♀ AMS. Papua New Guinea. Papua New Guinea: Aroana Estate, Aroa River.

mera Yang & Nagatomi. **Palaearctic:** China (Gansu, Shaanxi).

Solva mera Yang & Nagatomi, 1993: 44. HT ♂ BAUC. China. Shaanxi: Qinlin.

micholitzi (Enderlein). **Oriental:** Malaysia (Sarawak).

Hanauia micholitzi Enderlein, 1921: 173. HT ♂ ZMHU. Malaysia. Sarawak: Lundu.

montium Frey. **Oriental:** Myanmar.

Solva montium Frey, 1960: 14. ST 1♂, 3♀ UZMH. Myanmar. Kambaiti: 2000 m.

nigra (Brunetti). **Oriental:** India.

Xylomyia nigra Brunetti, 1923: 167. HT ♂ (stated ♀) BMNH. India. Sikkim.

nigricornis (Brunetti). **Oriental:** India.

Xylomyia nigricornis Brunetti, 1920: 99. HT ♀ ZSI. India. Assam: Garo Hills, above Tura, 3900 ft.

nigricoxalis Adisoemarto. **Oriental:** Indonesia (Java).

Solva nigricoxalis Adisoemarto, 1973: 36. HT ♀ MZB. Indonesia. Java: Tjibodas, 1500 m.

nigricoxis Enderlein. **Oriental:** India, Taiwan.

Solva nigricoxis Enderlein, 1921: 170. ST 1♂ ZMHU. India. Sikkim; ST 1♀ ZMHU. Taiwan. Hoozan: Toa Tsui Kutsu.

nigritibialis (Macquart). **Palaearctic:** Portugal (Madeira), Spain (Canary Islands).

Subula nigritibialis Macquart, 1839: 102. LT ♂ UMO [des. Báez (1988: 117)]. Spain. Canary Islands: Tenerife, Orotava.

Solva nigritibialis var. *minuta* Frey, 1936: 40. ST 1♂, 1♀ UZMH. Spain. Canary Islands: Tenerife, Tacoronte; ST 1♂, 1♀ UZMH. Spain. Canary Islands: Tenerife, Orotava.

nigriventris (Brunetti). **Oriental:** Myanmar.

Xylomyia nigriventris Brunetti, 1923: 168. HT ♀ BMNH. Myanmar. Taungoo.

nigroscutata de Meijere. **Oriental:** Indonesia (Java, Simeulue).

Solva nigroscutata de Meijere, 1916: 17. HT ♀ ZMAN. Indonesia. Simeulue Island: Sinabang.

novaeguineae Lindner. **Australian:** Papua New Guinea (Papua New Guinea).

Solva novaeguineae Lindner, 1938b: 431. ST 3♂, 3♀ CSIRO, 1♀ UNK. Papua New Guinea. Papua New Guinea: Wewak.

pallipes (Loew). **Nearctic:** Canada (Manitoba, Ontario, Quebec), USA (Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland,

Massachusetts, Mexico (Durango, Morelos, Puebla), Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, Wyoming). **Neotropical:** Mexico (Guerrero, Veracruz).

Xylophagus incisuralis. *Nomen nudum* [Massachusetts]. Harris 1835: 597.

Subula pallipes Loew, 1863: 6. LT ♂ MCZ [des. Webb (1984: 284)]. USA. Wisconsin.

Solva (Phloophila) pygmaea Hull, 1945: 264. HT ♀ CNC. USA. Mississippi: Oxford.

palmensis Báez. **Palaearctic:** Spain (Canary Islands).

Solva palmensis Báez, 1988: 120. HT ♂ coll. Báez. Spain. Canary Islands: La Palma: Dehesa.

planifrons (Yang & Nagatomi). **NEW COMBINATION. Oriental:** China (Guangxi).

Formosolva planifrons Yang & Nagatomi, 1993: 7. HT ♀ BAUC. China. Guangxi: Jinxiu.

procera (Frey). **Palaearctic:** Japan.

Xylomyia procera Frey, 1960: 7. HT ♀ UZMH. Japan. Shikoku: Tokushima, Iya, Sugeai.

Solva fuscitarsis Miyatake, 1965: 110. HT ♂ EUMJ. Japan. Shikoku: Kochi Prefecture, Kurosan.

pulchrina (Frey). **Oriental:** Myanmar.

Ceratosolva pulchrina Frey, 1960: 9. ST 1♂, 1♀ UZMH. Myanmar. Kambaiti, 2000 m.

rectitibia Frey. **Oriental:** Myanmar.

Solva rectitibia Frey, 1960: 15. HT ♂ UZMH. Myanmar. Kambaiti, 2000 m.

rufiventris (Bigot). **Afrotropical:** South Africa, Zimbabwe.

Subula rufiventris Bigot 1879: 194. ST 2♀ BMNH. South Africa. Natal.

schnitnikowi Pleske. **Palaearctic:** China, Kazakhstan, Tajikistan, Uzbekistan.

Solva schnitnikowi Pleske, 1928: 81. HT ♂ (stated ♀, Krivosheina *et al.* (1984: 8)) ZISP. Kazakhstan. Dzhungarskiy Alatau: Gasfortskiy Pass, SW of Kapal.

Solva schnitnikovi. Incorrect subsequent spelling. Krivosheina 1972: 71.

Solva schuitnikovi. Incorrect subsequent spelling. Krivosheina 1988: 40.

Solva schnitnikowi brunneola Krivosheina, 1999b: 201. HT ♀ ZISP. Tajikistan. Pamir, Khorog on Gunt River. **NEW SYNONYMY.**

Note: I do not find the characters used by Krivosheina (1999b) to diagnose *Solva schnitnikowi brunneola* sufficient to recognize a distinct subspecies. Furthermore, the specimens cited of the nominate subspecies include specimens from "Kondara, Tajikistan, 1100m", while three paratypes of *S. s. brunneola* are cited from "Kondara Canyon, Tajikistan, elevation 1100m", so the two color variants presumably occur at the same locality.

semota Krivosheina. **Palaearctic:** Russia.

Solva semota Krivosehina, 1972: 75. HT ♂ ZISP. Russia. Primorskiy kray: Suputinskiy (Ussurijskiy) zapovednik.

Solva remota. Incorrect subsequent spelling. Krivosheina 1988: 40.

shanxiensis Yang & Nagatomi. **Palaearctic:** China (Shanxi).

Solva shanxiensis Yang & Nagatomi, 1993: 46. HT ♂ BAUC. China. Shanxi: Yangcheng.

sikkimensis (Enderlein). **Oriental:** India.

Hanauia sikkimensis Enderlein, 1921: 171. ST 6♂, 6♀ ZMHU. India. Sikkim.

similis (Brunetti). **Oriental:** India.

Xylomyia similis Brunetti, 1923: 174. HT ♀ ZSI. India. Darjeeling District: Sureil, 5000 ft.

sinensis Yang & Nagatomi. **Oriental:** China (Guangxi, Yunnan).

Solva sinensis Yang & Nagatomi, 1993: 48. HT ♂ BAUC. China. Guangxi: Longzhou.

striata Yang & Nagatomi. **Oriental:** China (Guangxi).

Solva striata Yang & Nagatomi, 1993: 51. HT ♀ BAUC. China. Guangxi: Longsheng.

symata Séguy. **Oriental:** Laos.

Solva symata Séguy, 1948: 153. HT ♀ MNHNP. Laos. Sebanghien.

tamys Séguy. **Oriental:** India.

Solva tamys Séguy, 1956: 175. HT ♀ MNHNP. India. Madras: Kodaikanal.

thereviformis (Brunetti). **Oriental:** India.

Pararthropeas thereviformis Brunetti, 1920: 109. HT ♀ BMNH [not found]. India. Assam: Khasi Hills, 1000-3000 ft.

tigrina Yang & Nagatomi. **Oriental:** China (Fujian, Guangxi).

Solva tigrina Yang & Nagatomi, 1993: 53. HT ♀ BAUC. China. Guangxi: Longsheng.

tinctipes de Meijere. **Oriental:** Indonesia (Sumatra).

Solva tinctipes de Meijere, 1919: 21. ST 1♀ ZMAN. Indonesia. Sumatra: Suban Ajam; 1♀ ZMAN. Indonesia. Sumatra: Piek von Korintji.

truncativena (Enderlein). **Neotropical:** Costa Rica, Panama.

Subulonia truncativena Enderlein, 1913: 545. ST 1♂, 2♀ PAN. Costa Rica.

tuberculata Webb. **Nearctic:** Mexico (Morelos, San Luis Potosí). **Neotropical:** Belize, Bolivia, Colombia, Costa Rica, Guatemala, Mexico (Chiapas, Veracruz).

Solva tuberculata Webb, 1984: 288. HT ♂ CAS. Mexico. San Luis Potosí: 15 mi. N. Tamazunchale.

tuberifrons (Yang & Nagatomi). **NEW COMBINATION. Oriental:** China (Guangxi).

Formosolva tuberifrons Yang & Nagatomi, 1993: 9. HT ♀ BAUC. China. Guangxi: Tianlin.

uniflava Yang & Nagatomi. **Palaearctic:** China (Hubei). **Oriental:** China (Fujian).

Solva uniflava Yang & Nagatomi, 1993: 54. HT ♂ BAUC. China. Hubei: Tongshan, 1550 m.

varia (Meigen). **Palaearctic:** Austria, China (Beijing, Ningxia), Czech Republic, France, Germany, Great Britain, Italy, Romania.

Xylophagus ater. Misidentification. Latreille 1806: xviii; Tab. XVI, figs. 9, 10.

Xylophagus maculatus. Misidentification. Latreille 1809: 272.

Xylophagus varius Meigen, 1820: 14. LT ♀ MNHNP [des. Woodley (1999: 202)]: France: region of Paris or Austria.

Subula citripes Dufour, 1847: 12. ST 5♂, 2♀, 3A, larvae, pupae MNHNP. France. Saint-Sever.

varicolor (Bigot). **Palaearctic:** Spain (Canary Islands).

Subula varicolor Bigot, 1891: 276. HT ♂ UMO. Spain. Canary Islands: Gran Canaria.

verpa (Enderlein). **Oriental:** Malaysia (Sarawak).

Hanauia verpa Enderlein, 1921: 172. HT ♂ ZMHU. Malaysia. Sarawak: Lundu.

vittata (Doleschall). **Oriental:** Indonesia (Sumatra), Philippines. **Australian:** Indonesia (Maluku).

Subula vittata Doleschall, 1859: 86. ST A NMW [?]. Indonesia. Maluku: Ambon.

Solva vittipes Bezzi, 1914: 312. New name for *Subula vittata* Doleschall. Bezzi believed that *Subula vittata* Doleschall was a secondary homonym preoccupied by *Xylophagus vittatus* Walker, 1837 because Walker (1854: 110) later transferred his species to *Subula*. Walker's name is now considered to apply to a species in the fam-

ily Asilidae, *Holcocephala vittata* (Walker) (Martin & Papavero 1970: 35b.8).

wegneri Adisoemarto. **Australian:** Indonesia (Maluku).

Solva wegneri Adisoemarto, 1973: 39. HT ♀ MZB. Indonesia. Maluku: N. W. Obi, Laiwui.

yunnanensis Yang & Nagatomi. **Oriental:** China (Yunnan).

Solva yunnanensis Yang & Nagatomi, 1993: 59. HT ♀ BAUC. China. Yunnan: Xishuangbanna, 650 m.

Genus XYLOMYA Rondani

Subula Meigen, 1820: 15. Type species, *Xylophagus maculatus* Meigen, by designation of Westwood (1840: 130). Preoccupied by Schumacher 1817. Name originally proposed in synonymy with three included species, validated by subsequent usage (e.g., Macquart, 1834: 230).

Xylomya Rondani, 1861: 11. Type species, *Xylophagus maculatus* Meigen, automatic. New name for *Subula* Meigen.

Xylomyia. Incorrect subsequent spelling. Marschall 1873: 350.

Macroceromys. *Nomen nudum*. Bigot 1877a: 88.

Macroceromys Bigot, 1877b: 101. Type species, *Macroceromys fulviventris* Bigot, by monotypy.

Macroceratomyia. Unjustified emendation. Rye 1879: 191.

Subulaomyia Williston, 1896: 43. [As *Subula Omyia*]. Type species, *Xylophagus maculatus* Meigen, automatic. New name for *Subula* Meigen.

Xylomyia. Unjustified emendation. Bezzi 1903: 42.

Subulomyia. Unjustified emendation. Bezzi 1903: 42.

Hylomyia. Incorrect subsequent spelling. Washburn 1905: 82. I

Nematoceropsis Pleske, 1925: 175. Type species, *Nematoceropsis ibex* Pleske, by monotypy.

alamaculata Yang & Nagatomi. **Palaearctic:** China (Sichuan).

Xylomya alamaculata Yang & Nagatomi, 1993: 63. HT ♂ BAUC. China. Sichuan: Emeishan Mountain, 1800-1900 m.

americana (Wiedemann). **Nearctic:** Canada (Ontario, Quebec), USA (Arkansas, Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New York, North Carolina, Ohio, Pennsylvania, Texas, Virginia, Wyoming).

Xylophagus americanus Wiedemann, 1821: 1. LT ♀ (stated ♂) NMW [des. Webb (1984: 254, by assumption of holotype)]. North America.

aterrima Johnson. **Nearctic:** Canada (New Brunswick, Ontario), USA (Georgia, Illinois, Indiana, Michigan, Minnesota, New Hampshire, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Vermont, Virginia, Wisconsin.

Xylomyia aterrima Johnson, 1903: 25. ST 1♂ MCZ. USA. Northern Illinois; 1♀ MCZ. USA. New Hampshire: Franconia. Leonard's (1930: 39) assumption of "type" does not constitute a valid lectotype designation.

chekiangensis (Ôuchi). **Palaearctic:** China (Hubei, Sichuan). **Oriental:** China (Zhejiang).

Solva chekiangensis Ôuchi, 1938: 60. HT ♀ SCI. China. Zhejiang: Tienmushan.

ciscaucasica (Pleske). **Palaearctic:** Russia.

Solva ciscaucasica Pleske, 1928: 83. HT ♂ ZISP. Russia. North Caucasus: "environs de Wladikawkas" [=Ordzhonikidze].

czekanovskii (Pleske). **Palaearctic:** Finland, Russia.

Solva czekanovskii Pleske, 1925: 173. HT ♂ ZISP. Russia. Irkutsk oblast', SW Baikal, Kultuk.

Solva interrupta Pleske, 1925: 174. HT ♀ ZMAN. Locality not given, presumably Russia. Syn. Krivosheina 1972: 76.

Xylomyia maculata var. *sahlbergi* Frey, 1960: 5. ST ♂♀ UZMH. Finland. Yläne, Orivesi and Hattula; ST ♂♀ UZMH. Russia. Kivinebb and Haapanava.

decora Yang & Nagatomi. **Palaearctic:** China (Hubei).

Xylomya decora Yang & Nagatomi, 1993: 70. HT ♀ BAUC. China. Hubei: Shennongjia, 1600 m.

elongata (Osten Sacken). **Neotropical:** Guatemala.

Subula elongata Osten Sacken 1886: 22. HT ♂ BMNH. Guatemala. Capetillo.

farcus Washburn. **Nearctic:** USA (Minnesota).

Xylomyia farcus. Nomen nudum [Minnesota]. Washburn 1905: 85 [attributed to Williston]. Note: Treated as an "error" by James (1965: 299) under *X. parens* (Williston), presumably because *X. parens* is the only *Xylomya* that Williston described. Undoubtedly refers to another species as *X. parens* does not occur in Minnesota.

fasciata (Say). **Nearctic:** USA (Indiana).

Xylophagus fasciatus Say, 1829: 155. HT A ANSP [destroyed]. USA. Indiana. Note: *Xylophagus fasciatus* Say has been placed in *Xy-*

lomya by previous authors based on the original description of its color pattern, particularly the fasciate abdomen, but the species is unrecognized (see Webb 1984: 260).

fulviventris (Bigot). **Neotropical:** Mexico.

Macroceromys fulviventris Bigot, 1877b: 102. HT ♀ BMNH. Mexico.

Macroceromys fulviventris Bigot, 1879: 187. HT ♀ BMNH. Mexico. Preoccupied, primary homonym of *Macroceromys fulviventris* Bigot, 1877.

galloisi (Séguy). **Palaearctic:** Japan.

Solva galloisi Séguy, 1956: 174. HT ♀ MNHNP. Japan. Honshu: Hachioji, Mt. Takao.

gracilicorpus Yang & Nagatomi. **Palaearctic:** China (Heilongjian).

Xylomya gracilicorpus Yang & Nagatomi, 1993: 72. HT ♀ BAUC. China. Heilongjiang: Dailing.

longicornis Matsumura. **Palaearctic:** China, Japan, Russia.

Xylomyia longicornis Matsumura, 1915: 46. ST ♂♀ HUS. Japan. Hokkaido: Sapporo.

Nematoceropsis ibex Pleske, 1925: 175. HT ♀ (stated ♂, but see Krivosheina, *et al.* (1984: 7)) ZISP. Russia. South Primorye: Pogranitschnaja, or neighboring China (Heilongjiang).

Solva takachihoi Ôuchi, 1943: 485. HT ♂ SCI. Japan. Kyushu: Mt. Hiko.

luteicornis Frey. **Palaearctic:** Japan.

Xylomyia luteicornis Frey, 1960: 6. HT ♀ UZMH. Japan. Honshu: Karuizawa.

maculata (Meigen). **Palaearctic:** Austria, Czech Republic, Denmark, France, Germany, Great Britain, Hungary, Italy, Lithuania, Netherlands, Poland, Romania, Russia, Slovakia, Sweden, Switzerland, Ukraine.

Xylophagus maculatus Meigen, 1804: 154. HT ♂ MNHNP. France. Forest at St. Germain, near Paris.

Subula gracilicornis. *Nomen nudum*. Meigen 1820: 14 [published in synonymy, attributed to Megerle].

Xylomyia scutellata. *Nomen nudum*. Austen 1899: 182 [collection name attributed to Stephens].

matsumurai (Nagatomi & Tanaka). **Palaearctic:** Japan, Russia (Kunashir Island).

Solva longicornis Matsumura, 1916: 359. ST A HUS. Japan. Hokkaido: Sapporo. Preoccupied, primary homonym of *Solva longicornis* Enderlein, 1913.

Solva (Macroceromys) matsumurai Nagatomi & Tanaka, 1971: 113. HT ♂ KU. Japan. Kyushu: Hyuga, Mt. Kirishima.

mlokosiewczi (Pleske). **Palaearctic:** Georgia.

Solva mlokosiewczi Pleske, 1925: 171. HT ♀ ZISP. Georgia. Lagodekhi.

moiwana Matsumura. **Palaearctic:** China (Jilin, Liaoning, Heilongjiang), Japan, Korea, Russia (Eastern Siberia).

Xylomyia moiwana Matsumura, 1915: 46. ST ♂♀ HUS. Japan. Hokkaido: Sapporo.

Solva ussuriensis Pleske, 1925: 172. LT ♂ ZISP [des. Nartshuk, *in* Krivosheina *et al.* (1984: 8)]. Russia. vic. Vladivostok, Zolotoy Rog.

Xylomyia honsyuana Frey, 1960: 7. HT ♀ UZMH. Japan. Honshu.

pallidifemur Malloch. **Nearctic:** Canada (Quebec), USA (Alabama, Arkansas, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Tennessee, Virginia).

Xylomyia pallidifemur Malloch, 1917: 343. LT ♂ INHS [des. Webb 1984: 262]. USA. Illinois: Urbana.

parens (Williston). **Nearctic:** Canada (British Columbia), USA (California, Idaho, Nevada, Oregon, Utah, Washington).

Subula parens Williston, 1885: 122. HT ♀ SEMC. USA. "Washington T[erritor]y".

prista Enderlein. **Neotropical:** Mexico (Chiapas).

Xylomyia prista Enderlein, 1913: 541. ST 2♂ PAN. Mexico. Chiapas.

sauteri (James). **Oriental:** Taiwan.

Solva (Xylomyia) sauteri James, 1939: 33. HT ♂ DEI. Taiwan. Tsui Kutsu, Toa.

semimaculata Frey. **Oriental:** Myanmar.

Xylomyia semimaculata Frey, 1960: 5. ST 7♀ UZMH. Myanmar. Kambaiti, 2000 m.

shikokuana (Miyatake). **Palaearctic:** Japan.

Solva shikokuana Miyatake, 1965: 111. HT ♀ EUMJ. Japan. Shikoku: Ehime Prefecture, Mt. Saragamine.

sichuanensis Yang & Nagatomi. **Palaearctic:** China (Sichuan).

Xylomya sichuanensis Yang & Nagatomi, 1993: 78. HT ♀ BAUC. China. Sichuan: Emeishan.

simillima Steyskal. **Nearctic:** USA (Delaware, Illinois, Indiana, Iowa, Kansas, Maryland, Minnesota, Missouri, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, Wisconsin).

Xylomyia simillima Steyskal, 1947: 183. HT ♂ UMMZ. USA. Michigan: St. Joseph County, Nottawa.

sinica Yang & Nagatomi. **Palaearctic:** China (Shaanxi, Sichuan).

Xylomya sinica Yang & Nagatomi, 1993: 80. HT ♂ BAUC. China. Sichuan: Emeishan Mountain, 1800 m.

sordida (Pleske). **Palaearctic:** Russia.

Solva sordida Pleske, 1928: 82. HT ♀ ZISP. Russia. vic. Vladivostok, Narva River [as Sidemi].

Xylomyia sordida var. *permutata* Frey, 1960: 4. HT ♀ UZMH. Russia. Vladivostok, Sedanka.

tenthredinoides (Wulp). **Nearctic:** Canada (Ontario, Quebec), USA (Delaware, Georgia, Illinois, Iowa, Michigan, Minnesota, Mississippi, New Hampshire, New York, Pennsylvania, Virginia, Wisconsin).

Subula tenthredinoides Wulp, 1867: 132. ST ♀ RNH. USA. Wisconsin.

terminalis Vasey. **Nearctic:** USA (Connecticut, Massachusetts, Michigan, Minnesota, New York, Pennsylvania).

Xylomya terminalis Vasey, 1977: 115. HT ♀ CUI. USA. New York: Allegany County, Fillmore.

trinotata (Bigot). **Palaearctic:** Georgia, Iran, Russia, Ukraine.

Subula trinotata Bigot, 1880: 148. HT ♀ (stated ♂) UMO. "Caucas Mt.".

tuvensis Krivosheina. **Palaearctic:** Russia. **NEW STATUS.**

Xylomya czekanovskii tuvensis Krivosheina, 1999a: 207. HT ♂ IEME. Russia. Tuva region: vicinity of Shagonar. Note: Although described as a subspecies, the characters used to diagnose this taxon seem to be significant enough to recognize it at the species level.

wenxiana Yang, Gao & An. **Palaearctic:** China (Gansu).

Xylomya wenxiana Yang, Gao & An, 2005: 25. HT ♀ IZAS. China. Gansu: Wenxian, 900-1450 m.

xixiana Yang, Gao & An. **Palaearctic:** China (Henan).

Xylomya xixiana Yang, Gao & An, 2002: 25. HT ♂ BAUC. China. Henan: Xixia.

yasumatsui (Nagatomi & Tanaka). **Palaearctic:** Japan, Russia (Kunashir Island).

Solva (Macroceromys) yasumatsui Nagatomi & Tanaka, 1971: 128. HT ♂ KU. Japan. Hokkaido, Ashoro.

zhelochovtsevi Krivosheina. **Palaearctic:** Armenia, Russia.

Xylomya zhelochovtsevi Krivosheina, 1999a: 213. HT ♀ ZMM. Armenia. Dilijan.

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