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Rediscovery of Kurian's types of Hymenoptera at Forest Research Institute, Dehradun, India with notes on Indian bethylid fauna

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Abstract

The types specimens of many taxa described by Chandy Kurian were considered lost for many years, which prevented the recognition of the species delimited by him. Fifty holotypes have been rediscovered in the National Forest Insect Collection of Forest Research Institute, Dehradun, Uttarakhand, India. Forty-five types belong to Bethylidae (*Cephalonomia tritici*, *Chlorepyris biharina*, *C. mackenziei*, *C. pusana*, *C. sanctipauli*, *Epyris agraensis*, *E. agrensis*, *E. bombayensis*, *E. delhiensis*, *E. duni*, *E. duttai*, *E. indicae*, *E. manii*, *E. patnae*, *E. pusae*, *E. shishami*, *Goniozus ahmeadi*, *G. chatterjii*, *G. chowdhari*, *G. hybleae*, *G. lygropiae*, *G. madrassippattanami*, *G. marasmi*, *G. mori*, *G. morindae, G. nephoterycis*, *G. nilamburensis*, *G. pulveriae*, *G. salvadorae*, *G. sanctijohannis*, *G. thalasodi*, *Laelius agraensis*, *Odontepyris argyriae, O. batrae*, *O. cirphi, O. hypsipylae, O. indicus*, *Pristepyris agraensis*, *Pristocera govindrami*, *Sclerodermus delhiensis, Sc. hardwickiae, Sc. mori*, *Sc. raonis*, *Sulcomesitius bahaduri* and *Su. duni*), one to Chrysididae (*Lustrina assamensis*), three to Dryinidae (*Lestodryinus guptai, Neodryinus karnalensis* and *N. pusae*) and one to Formicidae (*Neoclystopsenella luffae*). Six new combinations are proposed: *Epyris mackenziei* **comb. nov.** from *Chlorepyris*; *Formosiepyris agraensis* **comb. nov.** from *Epyris*; *Holepyris raonis* **comb. nov.** from *Sclerodermus*; *Holepyris patnae* **comb. nov.** from *Epyris*; *Pristocera agraensis* **comb. nov.** from *Pristepyris*; and *Trachepyris sanctipauli* **comb. nov.** from *Chlorepyris*. We also provide updated diagnoses, as well as detailed remarks and photographs for all types rediscovered. In addition, we provide researchers worldwide with valuable taxonomic information for the Bethylidae, Chrysididae, Dryinidae and Formicidae described by Kurian. A review of Bethylidae from India and a tribute to Chandy Kurian has also been provided.

Key words: Bethylidae, Chrysididae, Chrysidoidea, Dryinidae, Formicidae

Introduction

Chandy Kurian was an entomologist who lived in Thiruvananthapuram, India and worked as the Head of Entomology Division, Central Plantation Crops Research Institute (CPCRI), Kayangulam, India (Rajagopal *et al*. 1991). Kurian worked on the taxonomy of mostly Hymenoptera, Malacostraca and Siphonostomatoida. He was a Research Associate and a Lecturer at the School of Entomology, St. John's College, Agra before he joined CPCRI in 1955, where he worked for almost 30 years on plant protection in plantation crops. He described 50 species as Bethylidae (Azevedo *et al*. 2018), including three genera. While 28 species were kept as the same status, some of them have been transferred to other families or genera, or synonymized to other names already occupied. For

instance, the monotypic genus, *Neoclystopsenella luffae* Kurian, 1955, described originally as Bethylidae, was recognized as an ant, belonging to *Tapinoma* Förster, 1850 by Brown (1988). Another monotypic genus attributed to Bethylidae, *Lustrina assamensis* Kurian, 1955, was recognized as belonging to Cleptinae (Chrysididae) by Nagy (1968). Subsequently, the genus was synonymized with *Cleptes* by Kimsey & Bohart (1991), without any taxonomic discussion. The genus status of *Lustrina assamensis* has been revalidated by Móczár (1996). After almost 70 years, the type of this species was rediscovered, studied, and well-illustrated by Rosa *et al*. (2020). According to Rosa *et al*. (2020), only Nagy (1968) was able to examine the type specimen and considered *Lustrina* a well-defined valid genus, separated from *Cleptes* Latreille, 1802 and *Cleptidea* Mocsáry, 1904. Additionally, Krombein (1996) suggested that some of Kurian's species were allocated incorrectly at the generic status, like *Neodisepyris* Kurian, 1955, which probably included species belonging to several other genera (Krombein 1996).

The other species described by Kurian could not be recognized or were studied exclusively on the basis of original descriptions. There has been a general impression among the taxonomic community that the types of species described by him were either lost or damaged (Krombein 1996, Azevedo *et al*. 2018). Krombein visited IARI in New Delhi in 1993 in order to study the types as mentioned in Kurian (1952), but he was not able to find any bethylid types there. Krombein, (1996, pg 2) writes:

"Kurian (1952, 1954b, 1955) mentioned the depositories from which material had been borrowed. V.K. Gupta (*in litt.*, 1984) advised me that, while at Agra in 1955-1956, he had sent two boxes of specimens including types to the Forest Research Institute (FRI), Dehra Dun, India, and that 'nearly all loan material was returned to the institutions that loaned the material.' I addressed letters to entomologists at the institutions concerned requesting information on the Kurian types supposedly in their collections. The only response I had was from P. Singh, FRI, who wrote that there were three Kurian types in that collection; based on data from Kurian's papers, I estimate that there should be nearly 30 Kurian types deposited at FRI. During a trip for field work in Sri Lanka in 1993, I had an opportunity to visit the Indian Agricultural Research Institute, Delhi, India. There were no Kurian types in their well-curated collection; there should have been at least two (Kurian, 1952). I had planned visits to FRI and Agra University during this trip, but my plans had to be cancelled due to an accident sustained in Calcutta."

Azevedo *et al*. (2018, p. 6), in their global guide, commented "Chandy Kurian described about 50 species, all from India (see Kurian 1952; 1954a,b; 1955), but unfortunately much of his type material was badly preserved in Indian institutions".

Kurian (1952; 1954a,b; 1955) mentioned the depositories from which material had been borrowed. In his 1952 publication, he described four bethylids, the types of which were supposed to be deposited in the Indian Agricultural Research Institute (IARI) and perhaps also at St. John's College, Agra. Kurian (1954a,b) published the "Catalogue of Oriental Bethyloidea" and described five more bethylid species, but he did not mention depository information for these types. Finally, Kurian's greatest contribution was "Bethyloidea from India", published in 1955 (Kurian 1955), in which he described 41 new species. The types of these 41 species were supposed to be deposited in the Forest Research Institute (FRI). Combinging the above, a total of 50 species were published in the aforementioned Kurian papers.

During the digitization work of the National Forest Insect Collection of Forest Research Institute, the first author had the opportunity to examine the whole of the collection. In this endeavor, all 50 types published by Chandy Kurian were rediscovered.

Finally, in this work we gathered data from the 50 Kurian types (Kurian 1952; 1954a,b; 1955) and provided updated diagnoses and illustrations by extended focus photography. As a result, we were able to propose several taxonomical acts and comments for all Kurian types now deposited in the collection of the Forest Research Institute, Dehradun, India.

Bethylid fauna from India: a review

Cameron (1888, 1897, 1899) was the first entomologist who worked on Indian Bethylidae and described *Epyris orientalis* Cameron, 1888, which was later transferred to *Pristocera* by Kieffer (1914) and *Epyris amatorius* Cameron, 1897 from Bengal, India. Cameron (1899) conducted a major study on Indian hymenopteran fauna, including many bethylids, and described *Epyris fuscinervis*, originally described in *Rhabdepyris*.

Ashmead (1903) described *Goniozus indicus* from Coimbatore, India. Cameron (1904) discovered the presence

of *Pristocera albopilosa* (originally described as *Epyris albopilosus*) from Darjeeling, India. Cameron (1907) conducted studies on parasitic hymenoptera and described *Disepyris pallidinervis* from Bombay, India. Turner (1914) described many fossorial hymenoptera including *Pristocera eironeformis* from Koornool District, India. Rohwer (1915) described *Goniozus fulvicornis*, originally described in *Trissomalus* from Karnataka, India and Lal (1939) described *Goniozus cuttockensis* Lal, 1939 from Orissa.

Ayyar (1917) catalogued wasps and bees described from the Indian subcontinent. Ayyar (1927) presented notes on parasitic hymenoptera of economic importance, including bethylids from South India. Rao & Cherian (1928) studied the biology and habits of females of *Goniozus nephantidis* (Muesebeck, 1934), the bethylid parasite of *Opisina arenosella* Walker. Muesebeck (1934) described seven species of Indian Bethylidae: *Trachepyris indicus*, originally described in *Pristobethylus*, *Goniozus nephantidis*, originally described in *Perisierola*, *Goniozus mellipes*, originally described in *Perisierola*, *Odontepyris quadrifoveatus*, originally described in *Parasierola*, *Pristocera areolata*, *Epyris politiceps* and *Epyris coriaceous* from southern India.

Kurian's contributions (1952; 1954a,b; 1955) have already been discussed above. Menon *et al*. (1959) described *Epyris rhizoperthae* (Menon, Chatterjee & Sarup, 1959), originally described in *Rhabdepyris*, which is a parasite of *Rhizopertha dominica* Fabricius, a pest of stored cereals.

Ram & Subba Rao (1967) provided the description of *Goniozus stomopterycis*, a primary larval parasite of *Stomopteryx nerteria* (Meyrick) in South India and a revised key to the Oriental species of *Goniozus* Forster. Nagy (1968) described *Mesitius krombeini*, originally described in *Pycnomesitius* from Mangalore; *Mesitius discolor*, originally described in *Botoryan* from Delhi and *Mesitius clavicornis*, originally described as *Zimankos pondo* (Benoit, 1968) from an unknown locality in Kerala.

Móczár (1970) described *Sulcomesitius evansi* from South India. Móczár (1971) described *Metrionotus biroi* from Bombay. Móczár (1977) described *Gerbekas indicus* originally described in *Sulcomesitius* from the Anamalai Hills of South India in his revisionary work on *Sulcomesitius*. Móczár (1984) published his revisionary work on Oriental Mesitiinae, which contained descriptions of 13 new species, keys to world genera, and keys to the species of *Heterocoelia* Dahlbom, *Sulcomesitius* Móczár, *Pycnomesitius* Móczár, *Metrionotus* Móczár and *Anaylax* Móczár (Móczár 1984). Gordh (1988 [1985]) described *Goniozus keralensis* from India and contributed taxonomic notes on related species.

Terayama (2004a) erected a new genus, *Formosiepyris*, based on the type species, *F. marishi*, from Thailand and described one species, *F. shiva*, from India. Terayama (2004b) described *Sierola indra* from Bangalore, India. Terayama (2005) described one new species, *Epyris karnatakensis*, from Yellapur, India. Azevedo & Waichert (2006) described *Apenesia sahyadrica* emerged from *Xylotrechus quadripes* Chevrolat, a coffee berry borer from the Coffee Research Station, Chikmagalur, India.

Lanes & Azevedo (2008) described *Discleroderma indiensis* emerged from *Xylotrechus quadripes* from Nullur, India. Santhosh & Narendran (2009) described *Goniozus armigerae*, which is parasitic on *Helicoverpa armigera* (Hiibn.). Santhosh & Ranjith (2015) described two new species, *Goniozus inauditus* Santhosh and *G. kuriani* Santhosh, associated with insect induced plant galls from India. Santhosh (2017) revised *Sierola* Cameron (Hymenoptera: Bethylidae) from the Oriental region.

Gupta *et al*. (2017) described *Megaprosternum cleonarovorum* emerged from *Cleonaria bicolor* Thomson from southern India. Finally, Azevedo *et al.* (2020) revised *Discleroderma indiensis*.

In total, the Indian fauna literature has 28 authors contributing to record 106 bethylid species known today.

Material and Methods

Photographs of the complete or partial body, head in frontal view, mesosoma in dorsal view (especially the metapectal-propodeal disc), and metasoma of type specimens that were pinned, glued on a card, or slide mounted were taken with the Automontage 3-D Imaging System (Systronics, UK) with a Q-Imaging Micropublisher 5.0 RTV digital camera mounted on an Olympus SZX-16 stereozoom microscope. Before digitization, each specimen was carefully cleaned of dirt or any other removable material with the help of fine needles and a brush. Excessive glue and rusted pins were carefully removed by soaking the specimen in distilled water. Specimens, while in water, were carefully cleaned with a fine, nº 000 brush, followed by dehydration in 80% ethanol, and final dehydration in absolute ethanol. Cleaned and dried specimens were photographed and remounted on a card or pin. Loose structures, which were damaged over time, were either glued at their respective places or glued on the original pin or card, or

on a new card and pinned along with the specimen. Photographs of slide-mounted parts (antennae, wings, and legs) were taken with a Nikon Digital Sight DS-Fi1using EDF module of NIS-Br software (Nikon) mounted on a Nikon Optiphot compound microscope.

The data for each species in the *Material examined* section are replicated from the original handwritten/printed labels, additional data are in square brackets, and corrections are in curly brackets. Corrections are mainly due to the reorganization of Indian states before and after independence, as the names of some localities on labels have changed. The photos of these original handwritten/printed labels on specimens are also provided.

Spellings of some species names mentioned on the labels are different from those published viz. '*Goniozus hyblaei'* for *G. hybleae,* '*G. hypsipyli'* for *G. hypsipylae, 'Epyris agrae*', for *Epyris agrensis*, '*Neodisepyris bombayei'* for *N. bombayensis,'N. indiae*' for *N. indicae*, '*Rhabdepyris agrae* for *R. agraensis*, *'Laelius agrae*' for *L. agraensis*, '*Scleroderma delhii*' for *Sc. delhiensis*, *Lustrina assami* for *L. assamensis*, '*Neodryinus karnalis*' for *N. karnalensis* and '*N. pusae'* for *N. pusaensis.*

Kurian partly dissected most of the holotypes or paratypes and mounted their parts on slides under one to many glass covers. However, he did not write locality data on the slide labels of the designated types. Therefore, for such types that are completely dissected and mounted on slides, the locality data is assumed to be the same as given in the original descriptions. Under the section *Type material*, Kurian mentions slide numbers, which he meant to write on the slides but never did, as a combination of "a number" suffixed with "/B". The prefix number is the number written on the label of a card-mounted specimen.

General conditions of types: all Kurian´s types are partially mounted on pins or cards and most of their appendages have been removed and mounted on slides. Types that were pinned on minutens (short insect pins) have severely damaged mesosomas due to rust. Body parts of some types were excessively covered with glue, applied either to adhere them on the card or to keep their parts intact. Slide mounted types are in good condition. Some taxonomic structures of poorly card mounted types could not be photographed as desired. However, it is worth emphasizing that these historic specimens are too delicate to undergo any additional manipulation beyond the careful cleaning, drying, and remounting carried out in this study. When possible, genitalia were dissected for male types. Male genitalia dissections are common and nedeed in species descriptions of Bethylidae. We dissected and analyzed the male genitalia, following the dissection protocols proposed by Ungureanu (1972) and Smith (1979). After the dissection, the genitalia were cleared, according to the following protocol, adptated from Martinelli *et al.* (2017): the last metasomal segment was submerged in 10% KOH solution in a porcelain spot plate and kept submerged at high temperature until complete digestion of all the soft tissue (5–20 minutes, depending on size). Then, the segment was washed in 25% acetic acid to neutralize the pH and finally, the genitalia, the tergum and the sternum were separated by dissection and washed with water to clean remaining tissues. Finally, the genitalia were mounted on slides and photographed.

Of the 45 bethylid species published by Kurian, 16 species were described based on male holotypes. However, during the genitalia dissections, we discovered that eight of these holotypes were actually females: *Cephalonomia tritici*, *Epyris duni*, *E. pusae*, *Goniozus ahmeadi*, *G. chowdhari*, *G. madrassippattanami*, *G. morindae* and *Sclerodermus mori*; two holotypes were entirely missing the metasoma, and genitalia were lost: *Chlorepyris biharina* and *Pristocera govindrami*; One holotype had its genitalia destroyed by dermertids: *Goniozus nephoterycis*; and the other five male holotypes were dissected and illustrated: *Epyris indicae*, *Epyris manii*, *Goniozus thalasodi*, *Holepyris patnae* and *Pristocera agraensis*, together with two male paratypes of *Goniozus madrassippattanami* and *G. salvadorae*. For more details, see remarks below for each species.

The abbreviations C1, C2, … = Slide cover numbers starting from nearer to the label; NFIC-FRI = National Forest Insect Collection, Forest Research Institute, Dehradun, India; S1, S2, … = slide numbers.

The terminology of the general morphology follow Lanes *et al*. (2020).

The results are presented according to current classification and arranged family-, subfamily-, genus- and species-wise. Species under each genus are arranged alphabetically. Under each species, the original reference is provided, followed by *Diagnosis*, *Material examined* with additions between brackets and/or corrections between braces, *Type conditions*, *Remarks*, and *Hosts*.

Results

From 50 Kurian types, 45 species belong to Bethylidae, three to Dryinidae and one each to Chrysididae and Formicidae.

I. Family Bethylidae Haliday, 1839

Subfamily Bethylinae Haliday, 1839

Type genus: *Bethylus* Latreille, 1802

Genus *Goniozus* Förster, 1856

Goniozus Förster, 1856, 2: 95, 96.
Type species: *Bethylus claripennis* Förster, 1851 by subsequent designation.

Kurian originally described 14 species of *Goniozus*, two in 1952 (*G. morindae* and *G. nephoterycis*) and 12 in 1955 (*G. ahmeadi*, *G. chatterjii*, *G. chowdhari*, *G. hybleae*, *G. hypsipylae*, *G. lygropiae*, *G. madrassippattanami*, *G. marasmi*, *G. mori*, *G. nilamburensis*, *G. sanctijohannis* and *G. thalasodi*). Evans (1978) synonymized *Perisierola* Kieffer, 1914 with *Goniozus,* and also transferred two species of *Odontepyris* Kieffer, 1904a described by Kurian (1954b) (*O. pulveriae*, *O. salvadorae*) to *Goniozus*. Later, Polaszek & Krombein (1994) transferred *G. hypsipylae* Kurian, 1955 to *Odontepyris*. As a result, *Goniozus* now has 15 species described by Kurian.

1. *Goniozus ahmeadi* Kurian, 1955
Fig. 1, A–K

Goniozus ahmeadi Kurian, 1955, 4: 114, 115, Figs: 171–175.
Type locality: Cuttack, Orissa, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 4.0 mm. General colour dark reddish-brown. Head as long as wide; frons polished; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; median clypeal carina high in lateral view; mandible tetradentate; antenna with dense pubescence, scape 3.0 × longer than pedicel, pedicel as long as first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, longer than parapsidal signum. Metapectal-propodeal disc wider than long; metapostnotal median carina anteriorly; first abdominal spiracle dorsally placed. Tarsal claw simple. Wings nearly hyaline; forewing with pterostigma dark brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ opened; hind wing with four hamuli. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Orissa*,] Cuttack, C.S. 223. From pupa in burrows of stem borer. M. Ahmed coll., 18-IX-1937, Imperial Entomologist 1938, Delhi, 869".

Type conditions. Holotype partly dissected on slide Nº. 26/B and remaining rested on the pin. *Pinned*: Head and mesosoma intact; metasoma pasted on a different card, but on the same pin. Head with right antenna; mesosoma with right mesoleg and metaleg, and left mesocoxa. *On slides*: S1 C1—one leg. S1 C2—two separated coxae and one leg without coxa. S2 C1—one antenna; one forewing; one leg without coxa. S2 C2—one forewing and one hind wing.

Remarks. Kurian (1955) mentioned the holotype, both on the slides and description, as male, but dissection of the metasoma confirmed it as female. Dissected ovipositor and last tergites of the holotype are mounted on a small square cover slip on S1.

Hosts. Lepidoptera: pupa in stem borer.

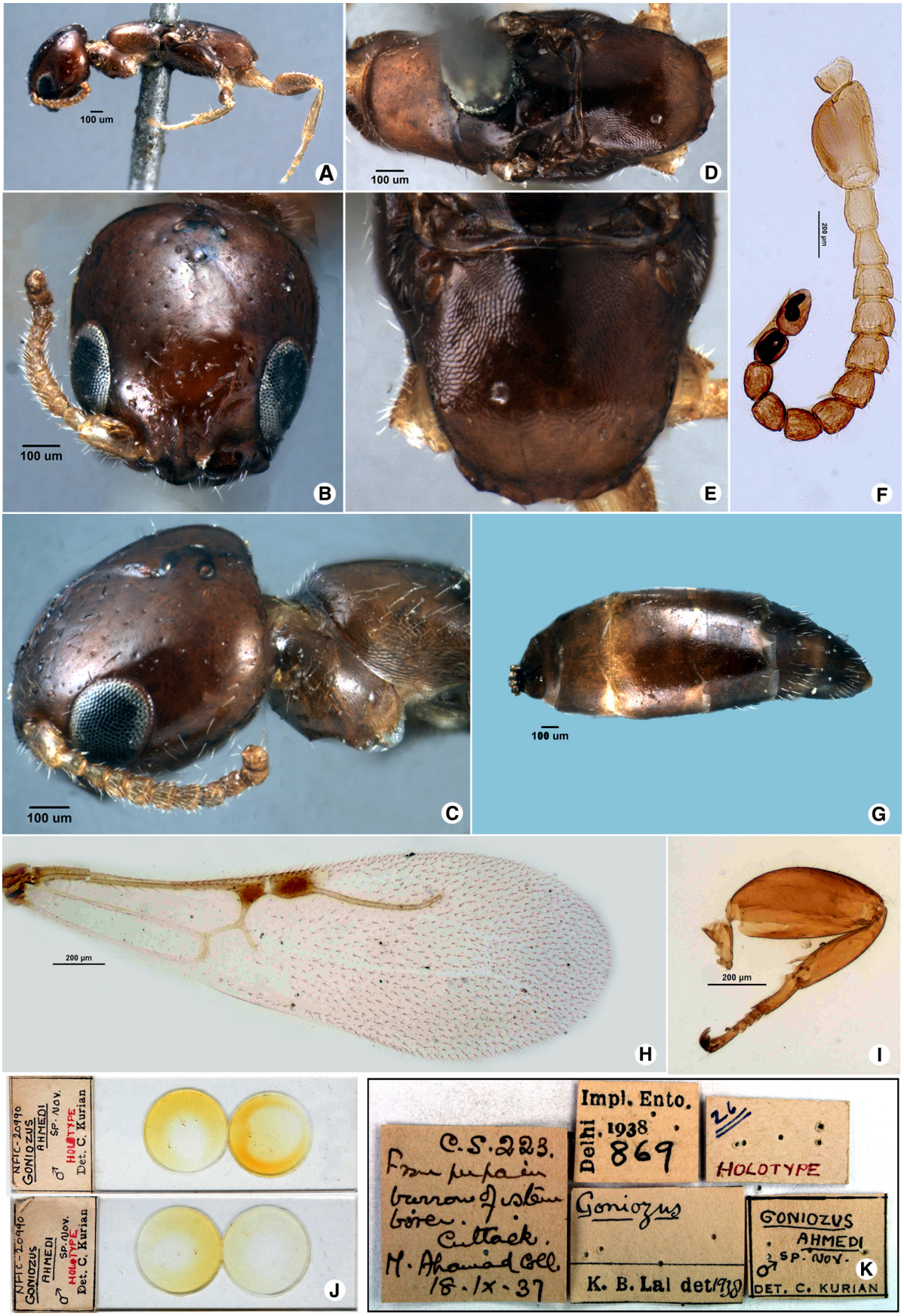

FIGURE 1. A–K. *Goniozus ahmeadi* Kurian, 1955. Holotype. **A.** Head and mesosoma, lateral view; **B.** Head, dorsal view; **C.** Head and pronotum, dorso-lateral view; **D.** Mesosoma, dorsal view; **E.** Metapectal-propodeal disc, dorsal view; **F.** Antenna; **G.** Metasoma, dorso-lateral view; **H.** Forewing; **I.** Proleg; **J.** Two slides of holotype; **K.** Labels.

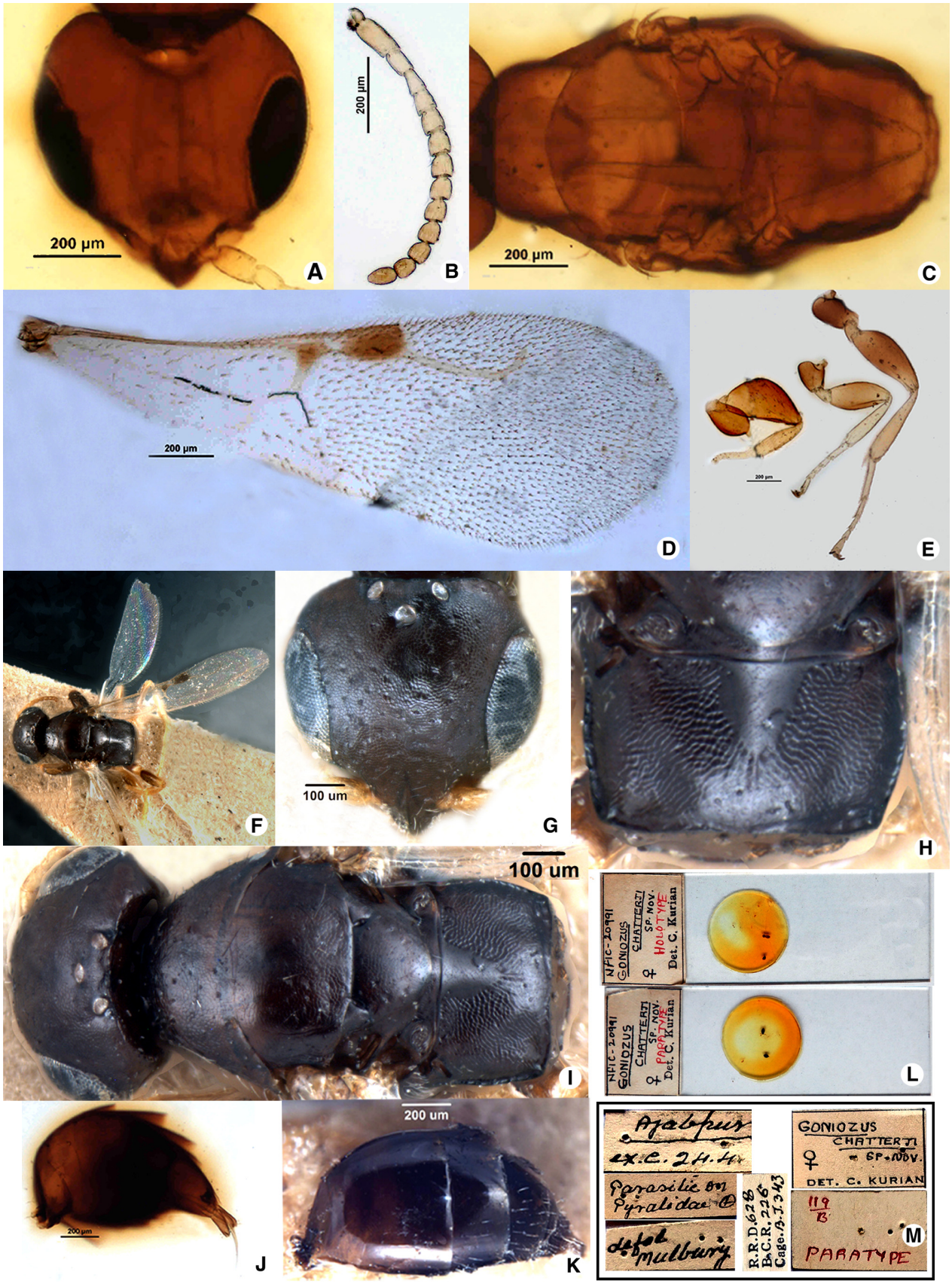

FIGURE 2. A–M. *Goniozus chatterjii* Kurian, 1955. **A–E, J.** Holotype. **A.** Head, dorsal view; **B.** Antenna; **C.** Mesosoma, dorsal view; **D.** Forewing; **E.** Legs; (left to right) pro, meso and metaleg; **J.** Metasoma. **F–I**, **K.** Paratype. **F.** Habitus, dorsal view; **G.** Head, dorsal view; **H.** Metapectal-propodeal disc, dorsal view; **I.** Head and mesosoma, dorsal view; **K.** Metasoma, dorso-lateral view; **L.** Two slides, upper of holotype and lower of paratype; **M.** Labels of paratype.

2. *Goniozus chatterjii* Kurian, 1955

Fig. 2, A–M

Goniozus chatterjii Kurian, 1955, 4: 113, 115–117, Figs: 176–181.
Type locality: Dehradun, Uttarakhand, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 2.4 mm. General colour dark brown to black. Head as long as wide; frons coriaceous; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin almost angled, longer than lateral ones; median clypeal carina high in lateral view; mandible tetradentate; antenna with dense pubescence, scape 2.3 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum longer than pronotal dorsal area; notauli inconspicuous. Metapectal-propodeal disc wider than long; metapostnotal median carina absent; first abdominal spiracle dorsally placed. Tarsal claw simple. Wings nearly hyaline; forewing with pterostigma dark brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ opened. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Uttarakhand*,] Dehra Dun {Dehradun}, parasitic on Pyralidae larvae defoliating mulberry, U.P. N.C. coll., 28-IV-1949, RRD 628, BCR 226, Chatterji Cage-B.J. 343, Ajabpur. Paratypes: 1♀, with same data as of the holotype.

Type conditions. Holotype completely dissected and mounted on a slide Nº. 125/B. *On slide***:** S1 C1—head (with one antenna) attached with mesosoma; metasoma; another antenna; six legs; two forewings and one hind wing. Paratypes partly dissected on slides Nº. 125/B is not present in NFIC and Nº. 119/B, and remaining rested on the pin. *Pinned*: Head and mesosoma intact; metasoma pasted on another card on the same pin. Head with right antenna complete, left with basal flagellomeres; mesosoma with all the legs, and both pairs of wings. *On slide*: S1 C1—mesosoma with one mesoleg and two metalegs; two forewings, two hind wings; one antenna; two legs, one with coxa and femur and another without coxa.

Remarks. Kurian (1955) cited two paratypes, but one with the number 125/B is not present in NFIC, only its labels are remaining.

Hosts. Lepidoptera: Pyralidae larvae on mulberry.

3. *Goniozus chowdhari* Kurian, 1955

Fig. 3, A–Q

Goniozus chowdhari Kurian, 1955, 4: 114, 117, 118, Figs: 182–187.
Type locality: Delhi, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 2.7 mm. General colour dark reddish-brown to black. Head slightly wider than long; frons coriaceous; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin angled, longer than lateral ones; median clypeal carina high in lateral view; mandible tetradentate; antenna with sparsesparse pubescence, scape 2.0 × longer than pedicel, pedicel shorter than first flagellomere. Pronotum coriaceous; mesonotum shorter than pronotal dorsal area; notauli incomplete, shorter than parapsidal signum. Metapectal-propodeal disc wider than long; metapostnotal median carina absent; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings nearly hyaline; forewing with pterostigma dark brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ opened; hind wing with three hamuli. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA,] *Delhi* {*National Capital Territory of Delhi*}, parasitic on [unidentified] larvae, F.L. Chowdhary [coll.], 2-VII-1938, Imperial Entomologist C.S. Nº. 3220. Paratypes: 2♀, same data of the holotype.

Type conditions. Holotype completely dissected on slide Nº. 91/B. *On slides*: S1 C1—three legs complete, one leg without tarsi, another without coxa, femur, and tarsomeres. S1 C2—head, mesosoma with left metaleg without tibia and tarsi, metasoma. S2 C1—one leg complete; one forewing. Paratypes completely dissected on slide 93/B and partly dissected on slide 80/B and remaining rested on the pin. *Pinned*: Head with left antenna, mesosoma with left pair of wings and right metaleg and metasoma glued from left side. *On slides*: S3 C1—one leg without coxa, few separated tarsomeres; one antenna complete (probably of another paratype). S4 C1—one forewing and one hind wing. S4 C2—two legs; one antenna complete.

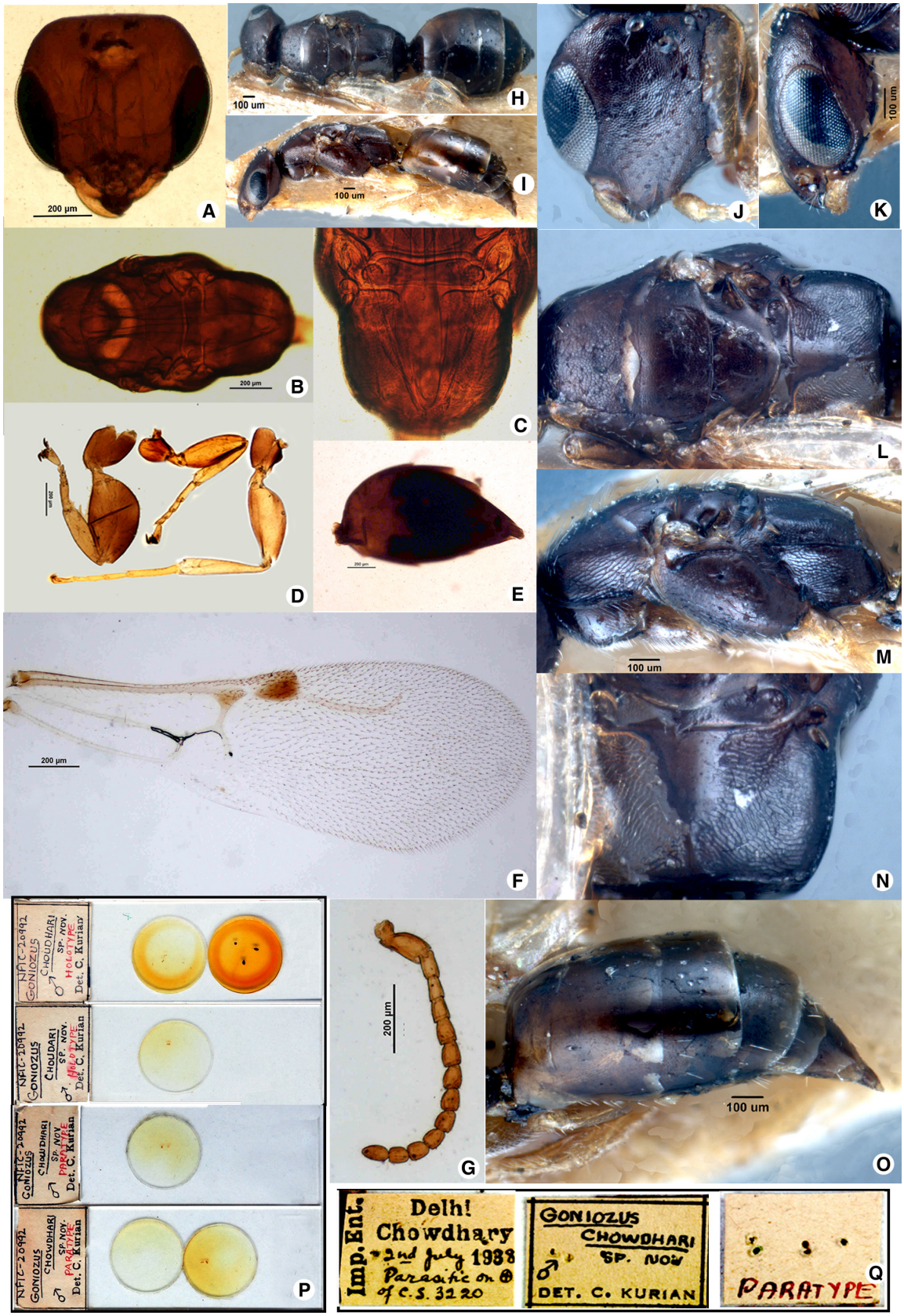

FIGURE 3. A–Q. *Goniozus chowdhari* Kurian, 1955. **A–G**. Holotype. **A.** Head, dorsal view; **B.** Mesosoma, dorsal view; **C.** Metapectal-propodeal disc, dorsal view; **D.** Legs; (left to right) pro, meso and metaleg; **E.** Metasoma; **F.** Forewing; **G.** Antenna. **H–O**. Paratype. **H.** Habitus, dorsal view; **I.** Habitus, lateral view; **J.** Head, dorsal view; **K.** Head, lateral view; **L.** Mesosoma, dorsal view; **M.** Mesosoma, lateral view; **N.** Metapectal-propodeal disc, dorsal view; **O.** Metasoma, lateral view; **P.** Four slides, upper two of holotype and lower of paratype; **Q.** Labels of paratype.

Remarks. Kurian (1955) described the holotype as male, and labeled the slides of the holotype as male, but dissection of the metasoma confirmed it as female. The dissected metasoma and ovipositor of the holotype is mounted on the same slide and cover S1 C2. Both paratypes are also females, not males as mentioned by Kurian. One of the paratypes is represented by its antenna only.

Hosts. Unknown.

4. *Goniozus hybleae* Kurian, 1955

Fig. 4, A–L

Goniozus hybleae Kurian, 1955, 4: 114, 118, 119, Figs: 188–193.
Type locality: Nilambur, Tamil Nadu, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length 2.0 mm–3.0 mm. General colour dark brown to black. Head wider than long; frons coriaceous; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin almost angled, longer than lateral ones; median clypeal carina high in lateral view; mandible tridentate; antenna with sparse pubescence, scape 2.6 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum as long as pronotal dorsal area; notauli inconspicuous. Metapectal-propodeal disc wider than long; metapostnotal median carina absent; first abdominal spiracle dorsally placed. Tarsal claw simple. Wings nearly hyaline; forewing with pterostigma dark brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein absent. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Kerala*,] Nilambur; [*Tamil Nadu*,] Madras, except: Nº. 248; RRD 671, parasitic on *Hyblaea puera,* 15-VII-1939. Paratypes: 2♀, same data of holotype.

Type conditions. Holotype partly dissected on slide Nº. 133/B and remaining rested on the pin. *Pinned*: mesosoma intact mesosoma with left pro- and metacoxa, right side glued and right legs inside the glue, metasoma intact. *On slides*: S1 C1—two legs, one without coxa another without distal two tarsomeres; basal half of forewing; three apical flagellomeres. S1 C2—crushed head with both antennae—one without three apical flagellomeres, second without scape, pedicel and first flagellomere. S2 C1—three forewings and two hind wings. S2 C2—one metaleg without coxa. Paratypes on pin with same label "Nº. 133/B" (see remarks).

Remarks. There are three specimens, each mounted on a card and all three pinned together. The holotype is not specified, but according to the original description and label "133/B Holo[type] & Para[type]", we concluded that the top specimen is probably the holotype and the lower two are the paratypes. While the slides are marked as 'holotype', fragments of the antenna (in S1 C1) and some of the forewings (in S2 C1) are from paratypes.

Hosts. Lepidoptera: Hyblaeidae: *Hyblaea puera* (Cramer).

5. *Goniozus lygropiae* Kurian, 1955

Fig. 5, A–L

Goniozus lygropiae Kurian, 1955, 4: 114, 121, 122, Figs: 200–205.
Type locality: Edacode, Nilambur, Tamil Nadu, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length 2.25 mm–3.0 mm. General colour dark reddish-brown. Head as long as wide; frons coriaceous; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin almost angled, longer than lateral ones; median clypeal carina high in lateral view; antenna with dense pubescence, scape 2.0 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum longer than pronotal dorsal area; notauli inconspicuous. Metapectal-propodeal disc as long as wide; metapostnotal median carina absent; first abdominal spiracle dorsally placed. Tarsal claw simple. Wings hyaline; forewing with pterostigma light brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ opened. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Kerala*,] Nilambur; [*Tamil Nadu*,] Madras, C Nº. 72 and 73, Edacode, S.N. Chatterji, 6-VII-1938, expt. 3056, parasitic on *Lygropia* sp. Paratypes: 9♀, same data of holotype, except: Nº. 132/B and 136/B, 11–14-IX-1939; Nº. 537, parasite of *Lygropia* sp., ex. cocoon 7-XI-1939; except: Nº. 32, 34, 35, lengeri, 27-VI-1938, parasitic on *Lygropia* sp.

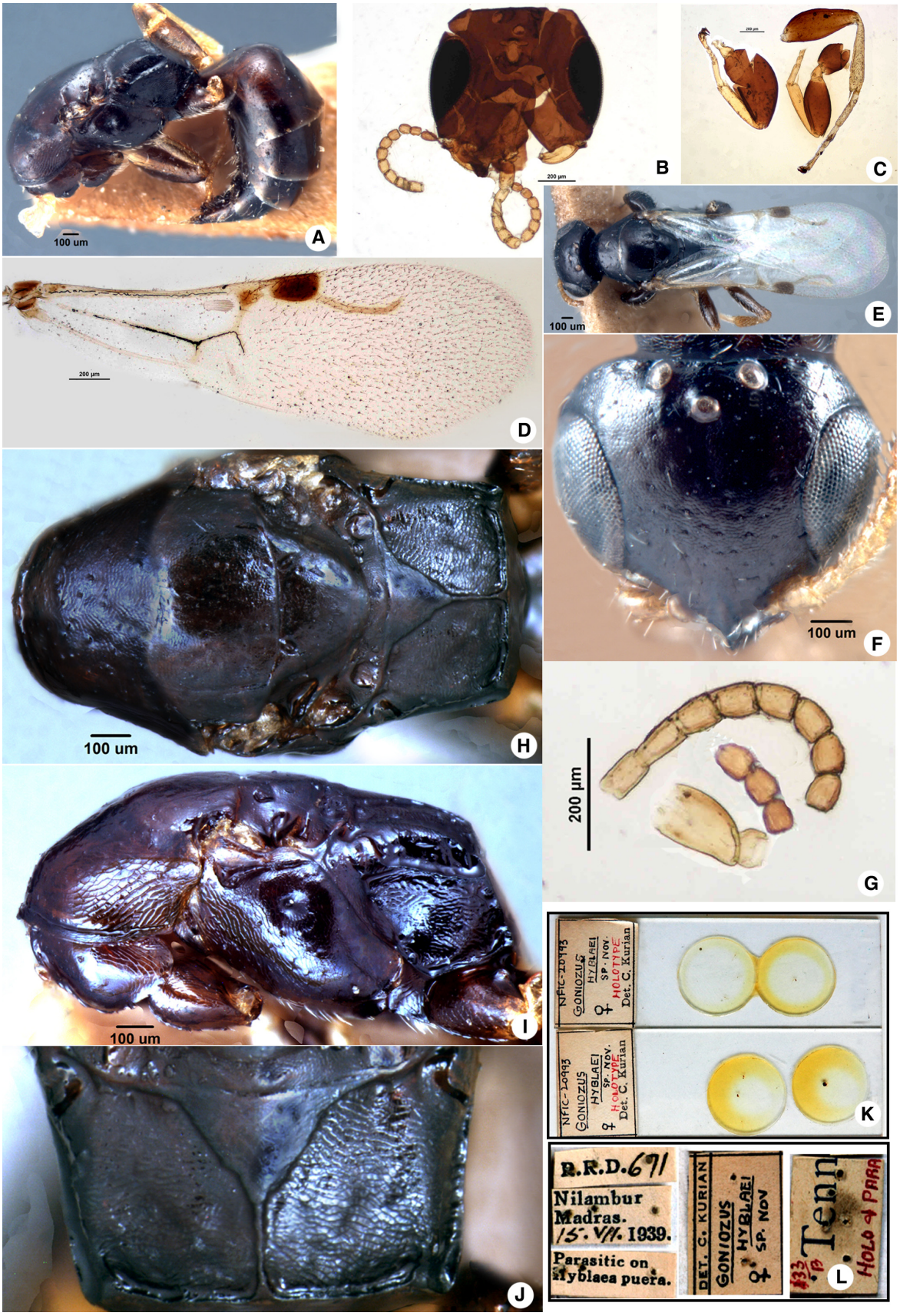

FIGURE 4. A–L. *Goniozus hybleae* Kurian, 1955. **A–D, H–J.** Holotype. **A.** Mesosoma and metasoma, dorso-lateral view; **B.** Head with antennae; **C.** Legs; (left to right) pro, meso and metaleg; **D.** Forewing; **H.** Mesosoma, dorsal view; **I.** Mesosoma, lateral view; **J.** Metapectal-propodeal disc, dorsal view. **E–G.** Paratype. **E.** Habitus, dorsal view; **F.** Head, dorsal view; **G.** Antenna. **K.** Two slides of holotype. **L.** Common labels of holotype and paratypes.

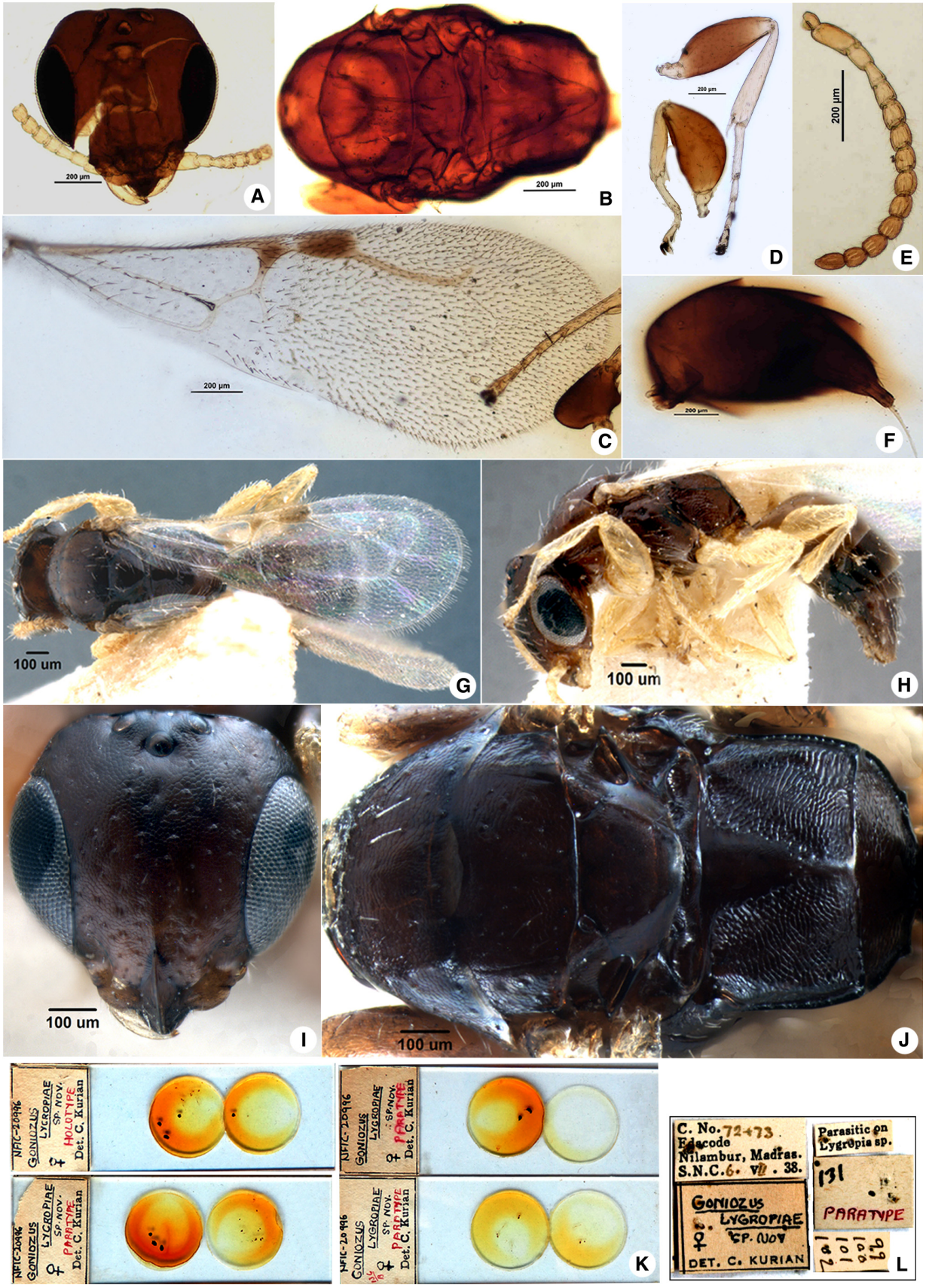

FIGURE 5. A–L. *Goniozus lygropiae* Kurian, 1955. **A–D, F.** Holotype. **A.** Head, frontal view; **B.** Mesosoma, dorsal view; **C.** Forewing; **D.** Legs (left to right) pro and metalegs; **F.** Metasoma, lateral view. **E, G–J.** Paratype. **E.** Antenna; **G.** Habitus, dorsal view; **H.** Habitus, lateral view; **I.** Head, frontal view; **J.** Mesosoma, dorsal view. **K.** Four slides, left top of holotype and rest of paratypes. **L.** Labels of paratype.

Type conditions. Holotype completely dissected on slide Nº. 131/B. *On slide*: S1 C1—head with both antennae attached, but apical flagellomeres are missing; another complete antenna besides the head (of a paratype); mesosoma with both procoxae and one left profemur, left mesocoxa and left metacoxa, right hind wing attached; two legs complete, two legs without coxae and one femur; two forewings. S1 C2—another head with scape attached; another antenna complete (probably of a paratype). Paratypes. *Pinned*: 4♀, each on a card all on a single pin with same label of holotype, a card with N.º 99, 100, 101, 102; 5♀ all pasted on a single card (132/B) and 1♀ on a card (136/B). *On slides*: S2 C1—head, mesosoma and metasoma. S2 C2—legs fragments; torn forewing in two pieces; antenna with scape, pedicel and seven flagellomeres and three flagellomeres fragmented. S3 C1—head; mesosoma (with attached left forewing and hind wing, left prolegs, right mesoleg and left metaleg); metasoma; one antenna complete; another with some flagellomeres, pedicel and scape missing; three legs, one without coxa; one forewing. S3 C2—one antenna and one forewing. S4 C1—two forewings; one hind wing; two legs; one antenna complete, another with two fragments (one with scape, pedicel and 1–4 flagellomeres; second with 5–10 flagellomeres). S4 C2—one forewing and two hind wings; one leg with detached coxa.

Hosts. Lepidoptera: Pyralidae: *Lygropia* sp.

6. *Goniozus madrassippattanami* Kurian, 1955

Figs 6, A–M; 51, A–B.

Goniozus madrassippattanami Kurian, 1955, 4: 114, 122, 123, Figs: 206–210.
Type locality: Nilambur, Tamil Nadu, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length 2.0 mm–2.6 mm. General colour dark reddish-brown to black. Head as long as wide; frons polished; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; median clypeal carina high in lateral view; antenna with sparse pubescence, scape 1.5 × longer than pedicel, pedicel as long as first flagellomere. Pronotum weakly coriaceous; mesonotum longer than pronotal dorsal area; notauli inconspicuous. Metapectal-propodeal disc wider than long; metapostnotal median carina absent; first abdominal spiracle dorsally placed. Tarsal claw simple. Wings hyaline; forewing with pterostigma dark brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ opened. Metasoma polished. Male. Morphologically similar to female, except for genitalia: Harpe completely divided into dorsal and ventral arms, shorter than gonostipes in dorsal view, dorsal arm with apex rounded, weakly arched inward; gonostipes wide, covering aedeagal base; apex of cuspis anterior to apex of dorsal arm of harpe; digitus with apex aligned to apex of cuspis, its posterior margin smooth; aedeagus bottle-shaped, its apex aligned to apex of digitus.

Material examined. Holotype: [INDIA, *Kerala*,] Nilambur [*Tamil Nadu*,] Madras, A.H. Khan [coll.], 1939, parasitic on *Hapalia machaeralis*, RRD 598. Paratype: ♂, same data of holotype.

Type conditions. Holotype completely dissected on slide Nº. 123/B. *On slide*: S1 C1—two legs, one without coxae; distal half of forewing; one antenna complete. S1 C2—one forewing and one hind wing. S2 C1—parts of six legs; two forewings. S2 C2—head; mesosoma; metasoma; one hind wing; one proleg without coxa and tarsi; one leg without coxae and femur. Paratypes on two cards on a pin with labels 123/B. *Pinned*: head missing; mesosoma with both pairs of wings; one leg and some coxae. Metasoma is mounted on a card on another pin, with the label "123/B, paratype". *On slide*: S1 C3—genitalia was dissected out from the card mounted meatasoma and mounted under a rectangular coverslip.

Remarks. Kurian (1955) described the holotype as male, and labeled the slides of the holotype also as male, but the dissection of the metasoma confirmed it as female. The dissected ovipositor and last tergites of the holotype are mounted on a small recangular cover slip on S1.

Hosts. Lepidoptera: Hyblaeidae: *Hapalia machaeralis* (Walker).

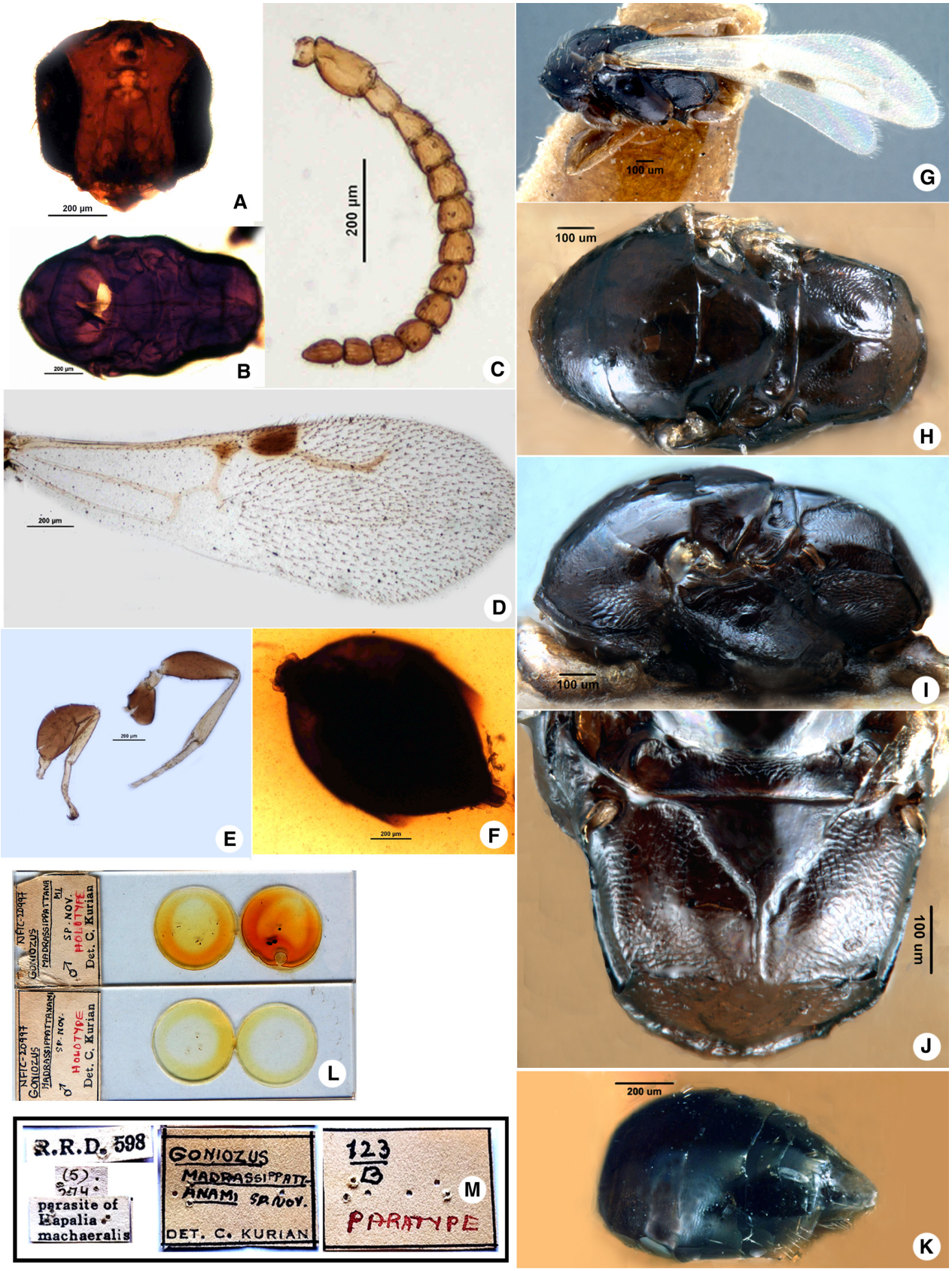

FIGURE 6. A–M. *Goniozus madrassippattanami* Kurian, 1955. **A–F**. Holotype. **A.** Head, frontal view; **B.** Mesosoma, dorsal view; **C.** Antenna; **D.** Forewing; **E.** Legs (left to right) pro and metalegs; **F.** Metasoma, dorsal view. **G–K.** Paratype. **G.** Mesosoma with forewing, lateral view; **H.** Mesosoma, dorsal view; **I.** Mesosoma, lateral view; **J.** Metapectal-propodeal disc, dorsal view; **K.** Metasoma, dorso-lateral view. **L.** Two slides of holotype. **M.** Labels of paratype.

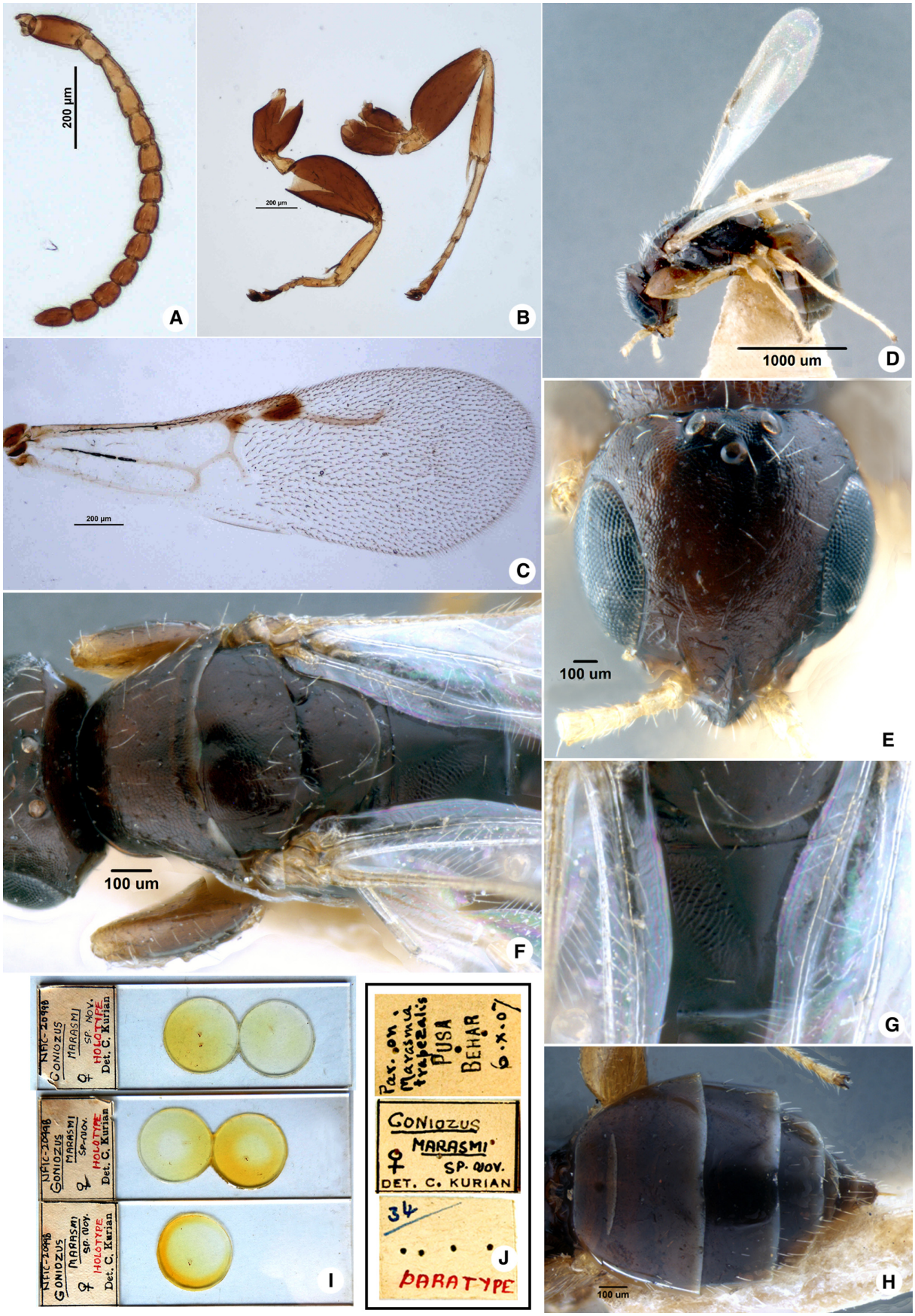

FIGURE 7. A–J. *Goniozus marasmi* Kurian, 1955. **A–C.** Holotype. **A.** Antenna; **B.** Legs (left to right) pro and metalegs; **C.** Forewing. D–H. Paratype. **D.** Habitus, lateral view; **E.** Head, frontal view; **F.** Mesosoma, dorsal view; **G.** Metapectal-propodeal disc, dorsal view; **H.** Metasoma, dorsal view. **I.** Three slides of holotype. **J.** Labels of paratype.

7. *Goniozus marasmi* Kurian, 1955
Fig. 7, A–J

Goniozus marasmi Kurian, 1955, 4: 114, 124, 125, Figs: 211–215.
Type locality: Pusa, Bihar, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length 2.5 mm–3.0 mm. General colour reddish-brown to black. Head as long as wide; frons coriaceous; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin angled, longer than lateral ones; median clypeal carina high in lateral view; mandible tetradentate; antenna with sparse pubescence, scape 2.0 × longer than pedicel, pedicel shorter than first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli absent. Metapectal-propodeal disc wider than long; metapostnotal median carina absent; first abdominal spiracle dorsally placed. Tarsal claw simple. Wings hyaline; forewing with pterostigma light brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ opened. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA,] *Bihar*, Pusa, 6-X-1907, parasitic on *Marasmia trapezalis*. Paratype: ♀, same data of holotype.

Type conditions. Holotype completely dissected on slide Nº. 95/B. Head, mesosoma and metasoma are lost. *On slides*: S1 C1—two legs; one antenna. S1 C2—one forewing and one hind wing. S2 C1—one leg. S3 C1—one forewing; one antenna. S3 C2—one leg. Paratypes partly dissected on slide Nº. 34/B and remaining rested on the pin. *Pinned*: complete female with distal flagellomeres broken.

Remarks. Some paratypes are not present in NFIC.

Hosts. Lepidoptera: Pyralidae: *Marasmia trapezalis* (Guenée).

8. *Goniozus mori* Kurian, 1955
Fig. 8, A–I

Goniozus mori Kurian, 1955, 4: 114, 125, 126, Figs: 216–221.
Type locality: New Forest, Dehradun, Uttarakhand, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 2.8 mm. General colour dark reddish-brown. Head as long as wide; frons coriaceous; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; median clypeal carina high in lateral view; mandible tetradentate; antenna with sparse pubescence, scape 1.5 × longer than pedicel, pedicel shorter than first flagellomere. Pronotum coriaceous; mesonotum shorter than pronotal dorsal area; notauli absent. Metapectal-propodeal disc as long as wide; metapostnotal median carina absent; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma light brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ opened. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Uttarakhand*,] Dehra Dun {Dehradun}, New Forest, B.M. Bhatia coll., 19-V-1940, cocoon collected on *Morus indica* leaves, D-45.

Type conditions. Holotype partly dissected and mounted on slide Nº. 126/B and remaining rested on the pin. Metasoma is missing. *Pinned*: head intact, with left antenna, mesosoma intact, with left metaleg and right pair of wings. *On slides*: S1 C1—six legs; one antenna; two forewings (one of these, probably belongs to the paratype), one hind wing.

Remarks: Holotype metasoma missing. Paratype is not present in NFIC.

Hosts. Unknown.

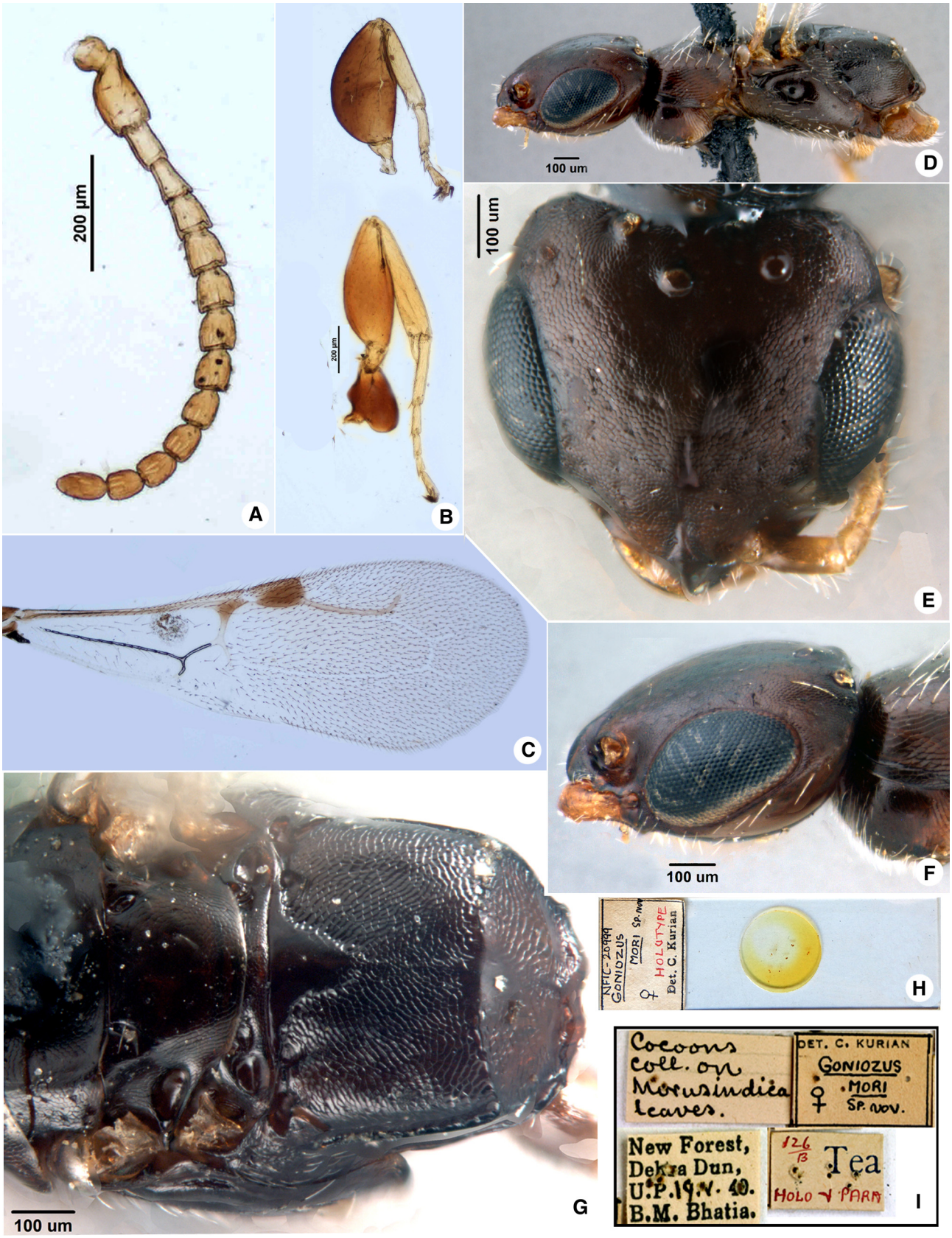

FIGURE 8. A–I. *Goniozus mori* Kurian, 1955. Holotype. **A.** Antenna; **B.** Legs, upper pro- and lower meta leg; **C.** Forewing; **D.** Head and mesosoma, lateral view; **E.** Head frontal view; **F.** Head and part of pronotum, in lateral view; **G.** Mesosoma, dorsal view; **H.** slide; **I.** Labels.

9. *Goniozus morindae* Kurian, 1952
Fig. 9, A–I

Goniozus morindae Kurian, 1952, 1: 66, 67, Figs: 7–11.
Type locality: Tanjore, Tamil Nadu, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 2.5 mm. General colour dark reddish-brown. Head wider than long; frons coriaceous; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin almost rounded, longer than lateral ones; median clypeal carina indistinct; mandible tridentate; antenna with dense pubescence, scape 2.0 × longer than pedicel, pedicel as long as first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli absent. Metapectal-propodeal disc as long as wide; metapostnotal median carina absent. Tarsal claw bifid. Wings hyaline; forewing with pterostigma light brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ opened. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA,] *Tamil Nadu*, Tanjore, 1930, M. S. Mani coll., bethylid parasites of *Asphondylia morindae* Mani, from gall Nº. 288 on flowers of *Morinda tinctoria* Roxb.

Type conditions. Holotype completely dissected and mounted on slide Nº.139/B. *On slides*: S1 C1—two legs; one forewing and one hind wing. S1 C2—mesosoma; metasoma placed lataerally and ovipositor dissected and placed near by; four legs, two without coxae, tibia, and tarsi; one forewing. S2 C1—head with both antennae attached. S2 C2—two legs; one forewing. Paratype female mounted on a slide—S3 C1 complete body on lateral side, metasoma detached. S3 C2—one head with a both antennae whose few distal segments missing, one leg.

Remarks. Kurian (1952) described the holotype as male, and labeled the slides of the holotype also as male, but the dissected metasoma (S1 C2) confirmed it as female. Labels of the holotype (handwritten) are on a pin from which the holotype was dissected and mounted on slides. In the type material of the original publication there is no mention of an allotype, but we found a slide of a female with the label of allotype (sex not marked on the slide) presented with details, as follows: S2 C1—head; mesosoma with pro- and mesolegs attached; two metalegs; metasoma, in lateral side. S3 C2—another female; head with antenna without distal flagellomeres; mesosoma with two prolegs and one metaleg; metasoma connected with mesosoma by petiole.

Hosts. Diptera: Cecidomyiidae: *Asphondylia morindae* Mani.

10. *Goniozus nephoterycis* Kurian, 1952
Fig. 10, A–K

Goniozus nephoterycis Kurian, 1952, 1: 63–66, Figs: 7–11.
Type locality: Pusa, Bihar, India (♂ holotype, NFIC-FRI).

Diagnosis. Male. Length about 2.75 mm. General colour dark reddish-brown to black. Head as long as wide; frons coriaceous; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin angled, longer than lateral ones; median clypeal carina high in lateral view; mandible tridentate; antenna with sparse pubescence, scape 2.0 × longer than pedicel, pedicel longer than first flagellomere. Pronotum coriaceous; mesonotum shorter than pronotal dorsal area; notauli absent. Metapectal-propodeal disc wider than long; metapostnotal median carina absent; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma light brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ opened. Metasoma damaged and genitalia lost. Female. Unknown.

Material examined. Holotype: [INDIA, *Bihar*], Pusa, 9-XI-1931, *Nephoteryx* larv[a]e binding leaves of *Cassia fistula*.

Type conditions. Holotype partly dissected and mounted on slide Nº. 1/B. *Pinned*: body complete. Head with scape, pedicel and few flagellomeres, mesosoma damaged with left legs. *On slide*: S1 C1—one forewing and one hind wing. S1 C2—one forewing and one hind wing. S2 C1—one leg. S2 C2—two legs; one antenna.

Remarks. The distal part of the metasoma is damaged (probably eaten by dermestids), and therefore the genitalia are missing.

Hosts. Lepidoptera: Phyticidae: *Nephoteryx* Hübner.

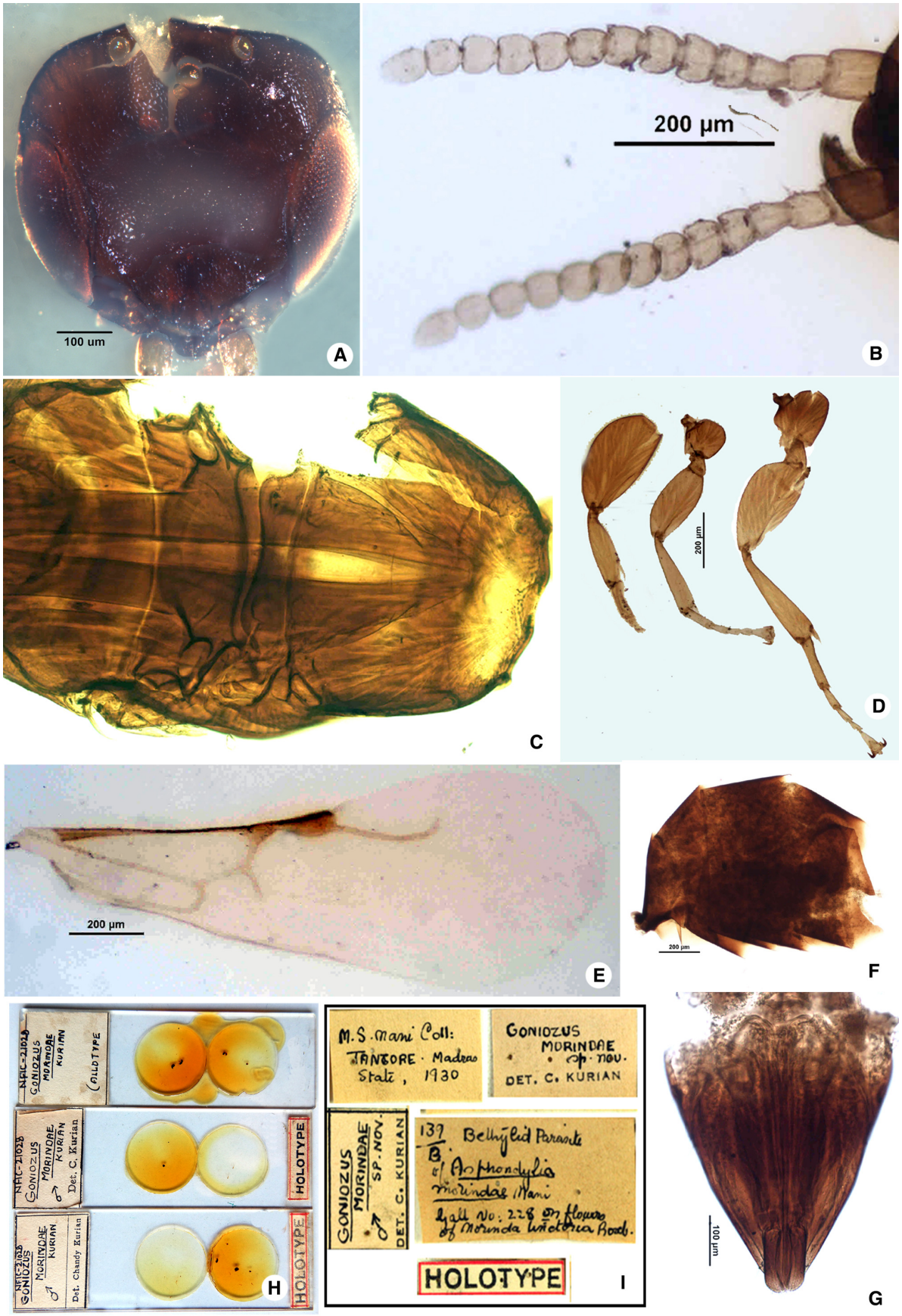

FIGURE 9. A–I. *Goniozus morindae* Kurian, 1952. **Holotype**. **A.** Head, frontal view; **B.** Antennae; **C.** Mesosoma, dorsal view; **D.** Legs (left to right) pro, meso and metaleg; **E.** Forewing; **F.** Metasoma without ovipositor; **G.** Ovipositor. **H.** Three slides, lower two of holotype and top one of paratype. **I.** Labels.

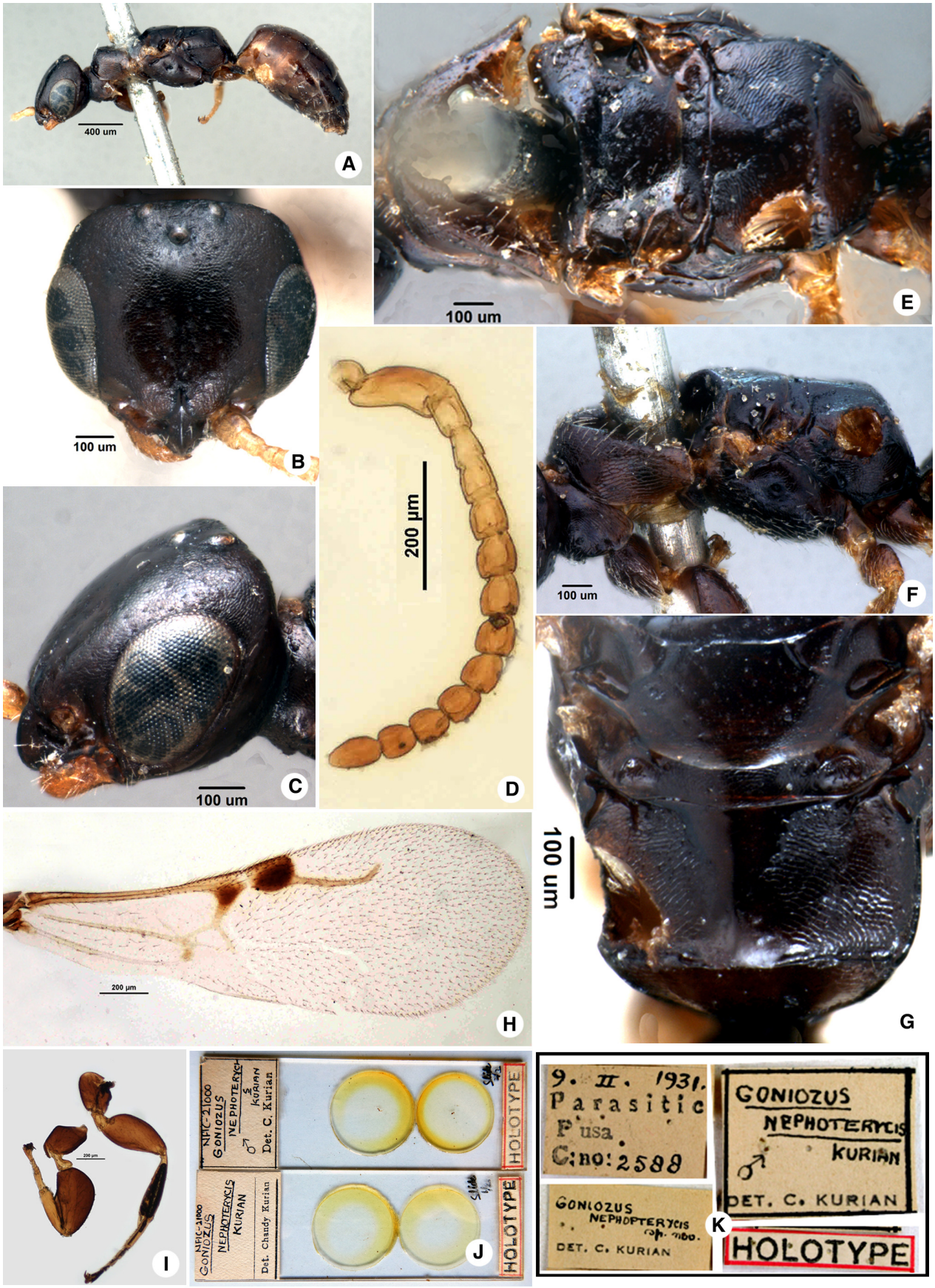

FIGURE 10. A–K. *Goniozus nephoterycis* Kurian, 1952. **Holotype**. **A.** Habitus, lateral view; **B.** Head, frontal view; **C.** Head, lateral view; **D.** Antenna; **E.** Mesosoma, dorsal view; **F.** Mesosoma, lateral view; **G.** Posterior half of mesonotum and Metapectal-propodeal disc, dorsal view; **H.** Forewing; **I.** Legs (left to right) pro- and metalegs; **J.** Two slides of holotype; **K.** Labels.

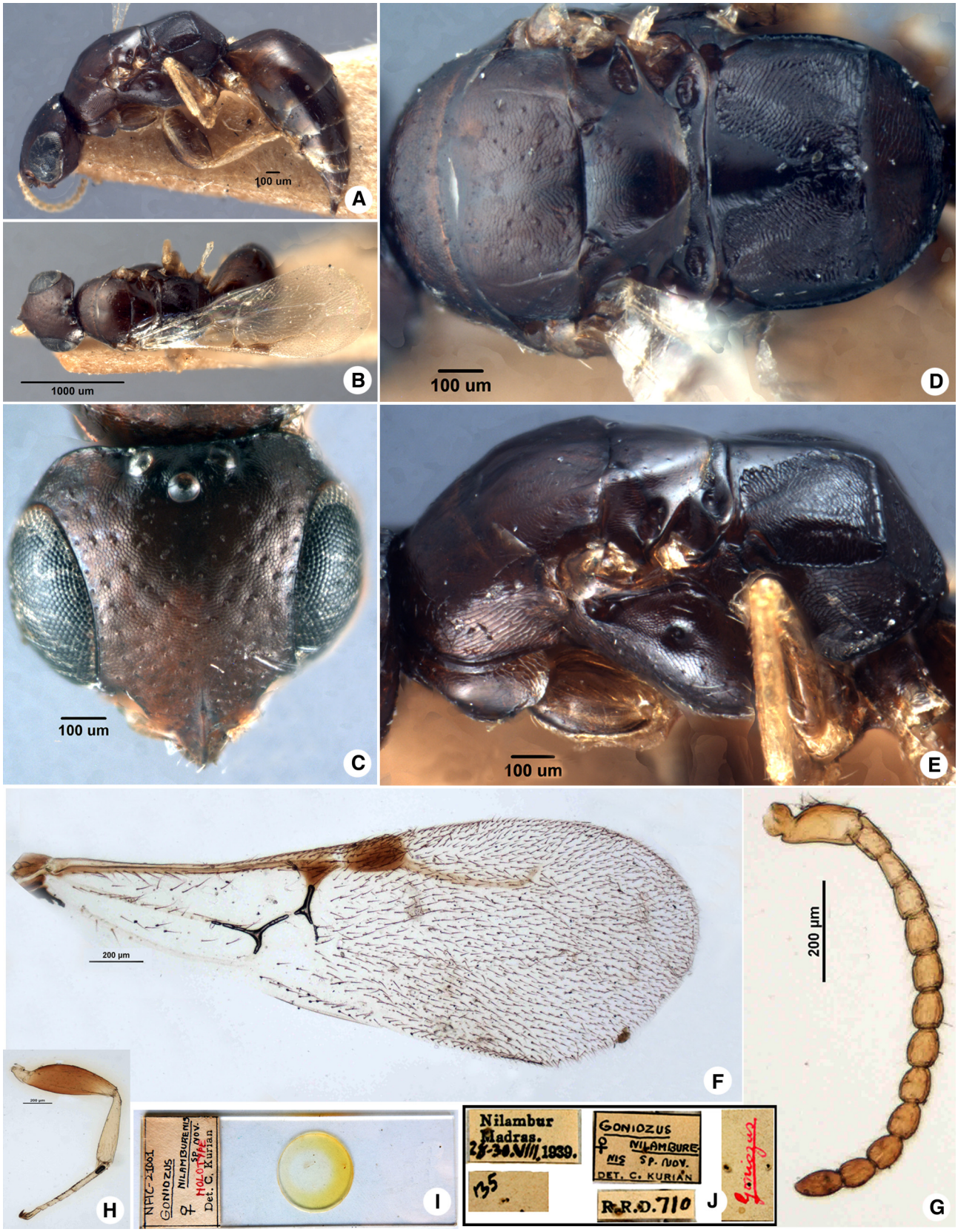

FIGURE 11. A–J. *Goniozus nilamburensis* Kurian, 1955. **Holotype**. **A.** Habitus, lateral view; **B.** Habitus, dorsal view; **C.** Head, frontal view; **D.** Mesosoma, dorsal view. **E.** Mesosoma, lateral view; **F.** Forewing; **G.** Antenna; **H.** Leg; **I.** Slide of holotype; **J.** Labels.

11. *Goniozus nilamburensis* Kurian, 1955
Fig. 11, A–J

Goniozus nilamburensis Kurian, 1955, 4: 114, 126–128, Figs: 222–226.
Type locality: Nilambur, Tamil Nadu, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length 2.75 mm–2.90 mm. General colour dark reddish-brown to black. Head wider than long; frons coriaceous; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; median clypeal carina high in lateral view; antenna with sparse pubescence, scape 1.3 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum longer than pronotal dorsal area; notauli absent. Metapectal-propodeal disc wider than long; metapostnotal median carina absent; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma dark brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ opened. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Kerala*,] Nilambur; [*Tamil Nadu*,] Madras, 25–30-VIII-1939, *P. lacca* sp. Paratypes: 5♀, same data of the holotype.

Type conditions. Holotype partly dissected on slide Nº. 134/B and remaining rested on the pin. *Pinned*: body complete and intact, right wings, antenna and proleg removed. *On slide*: S1 C1—forewing; one leg without coxa and antenna. Paratypes on pin Nº. 134/B and Nº. 135/B. *Pinned*: body intact.

Remarks. There are five specimens mounted onto two different pins and the labels "Holotype/Paratype" are not present on either of the pins. One pin has a label Nº. 134 and contains two specimens on different cards; the second lower specimen on this pin, with left antenna and left forewings removed, matches the slide mounted specimen and its collection data also matches with the holotype mentioned by Kurian. These observations confirm that this specimen is the holotype. So, the upper specimen on this pin is the paratype. There is a second pin with tag Nº. 135 and has three specimens on three cards, both with det. labels by Kurian are present.

Hosts. Unidentified genus: *P. lacca* sp.

12. *Goniozus pulveriae* (Kurian, 1954b)
Fig.12, A–J

Perisierola pulveriae Kurian, 1954b, 3: 429–433, 436, Figs: 24–33.
Type locality: Dehradun, Uttarakhand, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 3.0 mm. General colour brownish to black. Head longer than wide; frons coriaceous; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, anterior margin angled, longer than lateral ones; median clypeal carina high in lateral view; antenna with dense pubescence, scape 2.0 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli present, weak. Metapectal-propodeal disc as long as wide; metapostnotal median carina absent; first abdominal spiracle dorsally placed. Tarsal claw simple. Wings hyaline; forewing with pterostigma light brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ closed. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Uttarakhand*,] Dehra Dun {Dehradun}, 10-I-1938, P.M. Glover [coll.], Ex. *Holcocera pulverea,* predator on *Tachardia lacca*.

Type conditions. Holotype completely dissected on slide Nº. 143/B. *On slides*: S1 C1—body complete and intact—head with left antenna, mesosoma with two metalegs and metasoma. S2 C1—one antenna; two forewings and one hind wing; one foreleg and one legs, one with the separated coxa. Allotype body parts are missing, and slides are not present in NFIC.

Hosts. Lepidoptera: Blastobasidae: *Holcocera pulverea* (Meyrick).

Remarks: In the description it is mentioned that the holotype and allotype are partially dissected with the remaining parts rested on the pin. However, the slides marked as 'holotype' have most of the body parts except some legs as per details given above. Labels with the collection details for the holotype are pinned. Similarly, the labels of collection details for the allotype are also pinned without any body parts. Allotype slides are not present in NFIC. Apart from these, four more non-type specimens from the series are present in NFIC, and one of them is photographed.

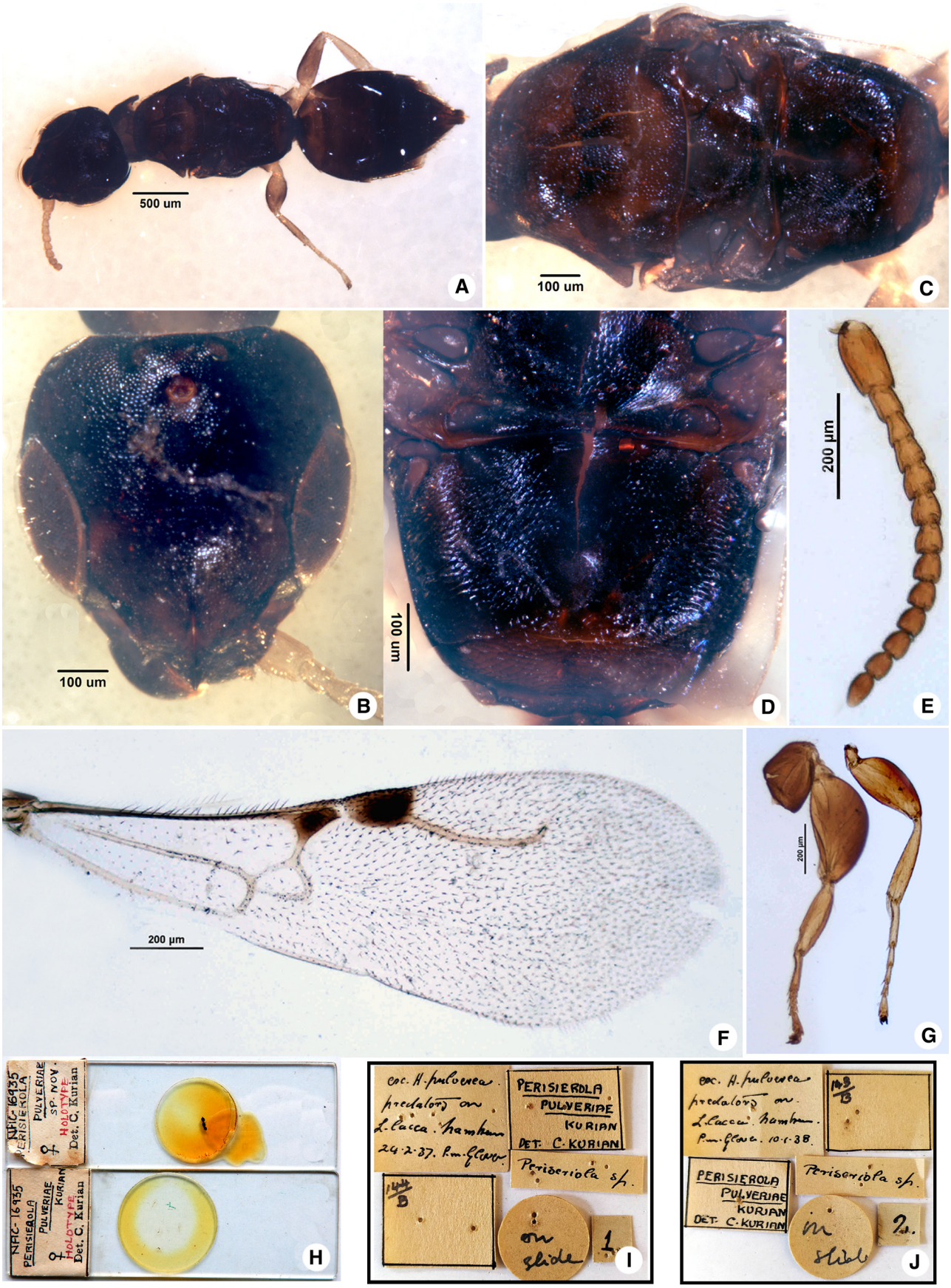

FIGURE 12. A–J. *Goniozus pulveriae* (Kurian, 1954b). Holotype. **A.** Habitus, dorsal view; **B.** Head, frontal view; **C.** Mesosoma, dorsal view; **D.** Posterior half of mesonotum and Metapectal-propodeal disc, dorsal view; **E.** Antenna; **F.** Forewing; **G.** Legs, left proleg and right metaleg; **H.** Two slides of holotype; **J.** Labels of paratype; **J.** Labels of holotype.

13. *Goniozus salvadorae* (Kurian, 1954b)

Figs 13, A–H; 51, C–D.

Perisierola salvadorae Kurian, 1954b, 3: 433–436, 437, Figs: 34–39.
Type locality: St John's College, Agra, India (♀ holotype, NFIC-FRI).

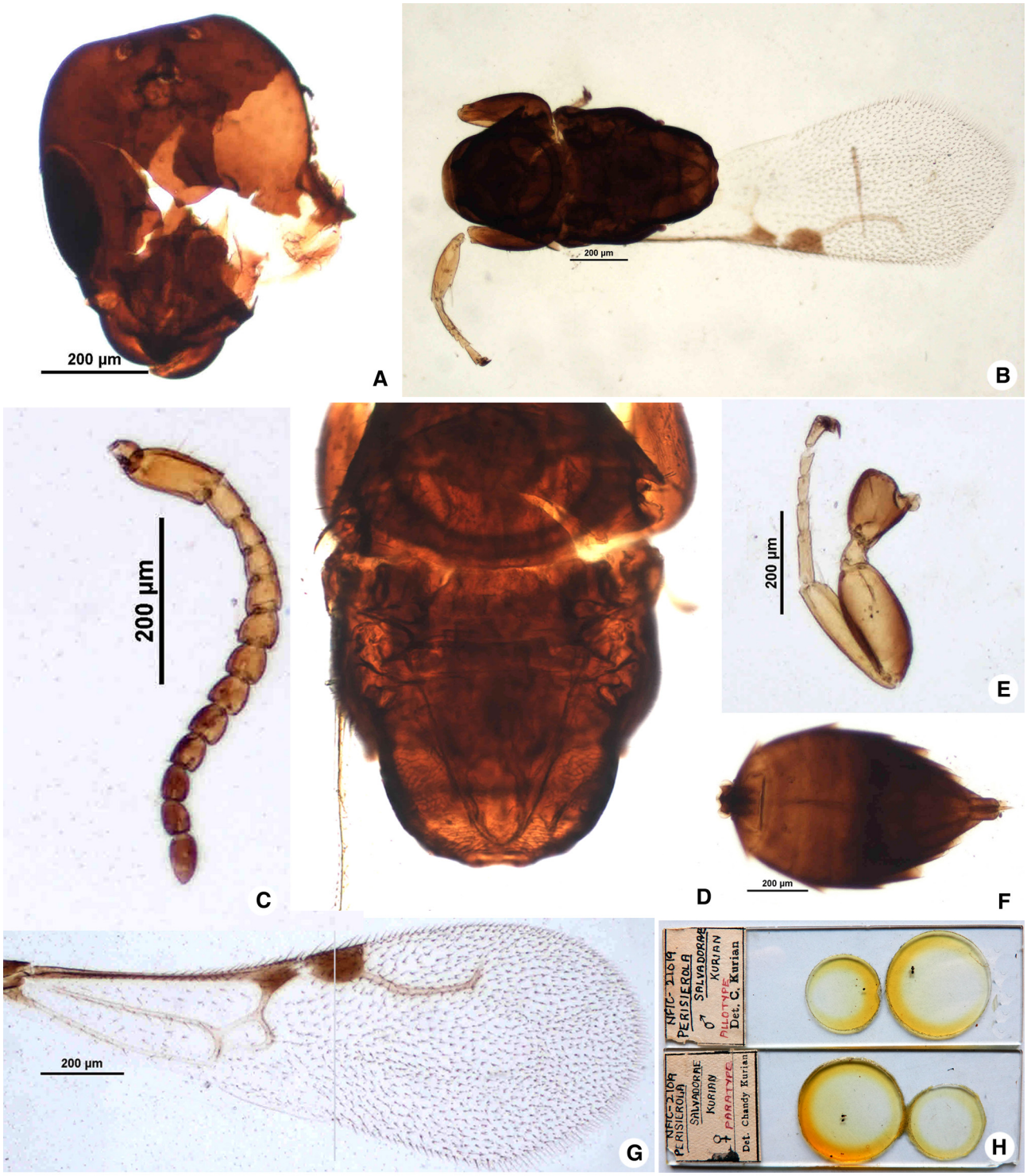

FIGURE 13. A–H. *Goniozus salvadorae* (Kurian, 1954b). Holotype. **A.** Head, frontal view; **B.** Mesosoma, dorsal view; **C.** Antenna; **D.** Posterior half of mesonotum and Metapectal-propodeal disc, dorsal view; **E.** Proleg; **F.** Metasoma, dorsal view; **G.** Forewing; **H.** Two slides, lower one is of holotype (mistakenly marked as paratype).

Diagnosis. Female. Length 2.0 mm–2.5 mm. General colour black. Head wider than long; frons weakly coriaceous; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones;

median clypeal carina high in lateral view; mandible tetradentate; antenna with dense pubescence, scape 2.0 × longer than pedicel, pedicel longer than first flagellomere. Pronotum coriaceous; mesonotum shorter than pronotal dorsal area; notauli present, weak. Metapectal-propodeal disc as long as wide; metapostnotal median carina absent. Tarsal claw simple. Wings hyaline; forewing with pterostigma light brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ closed. Metasoma polished. Male. Morphologically similar to female, except for genitalia: Harpe completely divided into dorsal and ventral arms, shorter than gonostipes in dorsal view, dorsal arm with apex rounded, not arched inward; gonostipes wide, covering aedeagal base; apex of cuspis anterior to apex of dorsal arm of harpe; digitus with apex posterior to apex of cuspis, its posterior margin serrated; aedeagus bottle-shaped, its apex aligned to apex of digitus.

Material examined. Holotype: [INDIA, *Uttar Pradesh*,] Agra, St John's College, 25-XI-1954, Chandy Kurian coll., bethylid parasites from Psyllid galls on S*alvadora persicae*. Allotype: 1♂, same data of holotype.

Type conditions. Holotype completely dissected on slide Nº. 148/B. *On slides*: S1 C1—head (cracked); mesosoma with both prolegs and one forewing; metasoma; two legs complete; one tibia and tarsi. S1 C2—two antennae, one with two distal flagellomeres missing; two legs, one with tarsi and tibia missing; one coxa; one forewing. Allotype male dissected on slide Nº. 149/B. *On slides*: S2 C1—head with partial antenna; four legs, two without coxae. S2 C2—mesosoma and metasoma intact with two forewings, hind wings and one metaleg.

Remarks: Kurian dissected one female (holotype) and one male (allotype) on two slides. However, on one of the slides, "Paratype" is mistakenly written instead of "Holotype". The paratypes (in alcohol) are not present in NFIC.

Hosts. Lepidoptera: Blastobasidae: *Holcocera pulverea* (Meyrick).

14. *Goniozus sanctijohannis* Kurian, 1955

Fig. 14, A–J

Goniozus sancti-johannis Kurian, 1955, 4: 114, 128, Figs: 227–231.
Type locality: St John's College, Agra, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 3.0 mm. General colour black. Head as long as wide; frons coriaceous; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; median clypeal carina high in lateral view; antenna with sparse pubescence, scape 1.5 × longer than pedicel, pedicel shorter than first flagellomere. Pronotum coriaceous; mesonotum shorter than pronotal dorsal area; notauli absent. Metapectal-propodeal disc wider than long; metapostnotal median carina absent; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma dark brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ opened. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Uttar Pradesh*,] Agra, St John's College, 10-III-1950, Chandy Kurian coll.

Type conditions. Holotype partly dissected on slide Nº. 21/B and remaining rested on the pin. *Pinned*: body complete and intact. Head with left antenna, mesosoma with left pair of wings and left metaleg. *On slides*: S1 C1—one forewing and one hind wing. S1 C2—one proleg without coxa; one antenna. S2 C1—one mesoleg complete; three legs without coxae; two separate coxae.

Hosts. Unknown.

15. *Goniozus thalasodi* Kurian, 1955

Figs 15, A–L; 51, E–F.

Goniozus thalasodi Kurian, 1955, 4: 114, 129, 130, 135, Figs: 232–236.
Type locality: Pusa, Bihar, India (♂ holotype, NFIC-FRI).

Diagnosis. Male. Length about 1.8 mm. General colour dark reddish-brown to black. Head as long as wide; frons coriaceous; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin angled, longer than lateral ones; median clypeal carina high in lateral view; antenna with dense pubescence, scape 1.8× longer than pedicel, pedicel as long as first flagellomere. Pronotum coriaceous; mesonotum shorter than

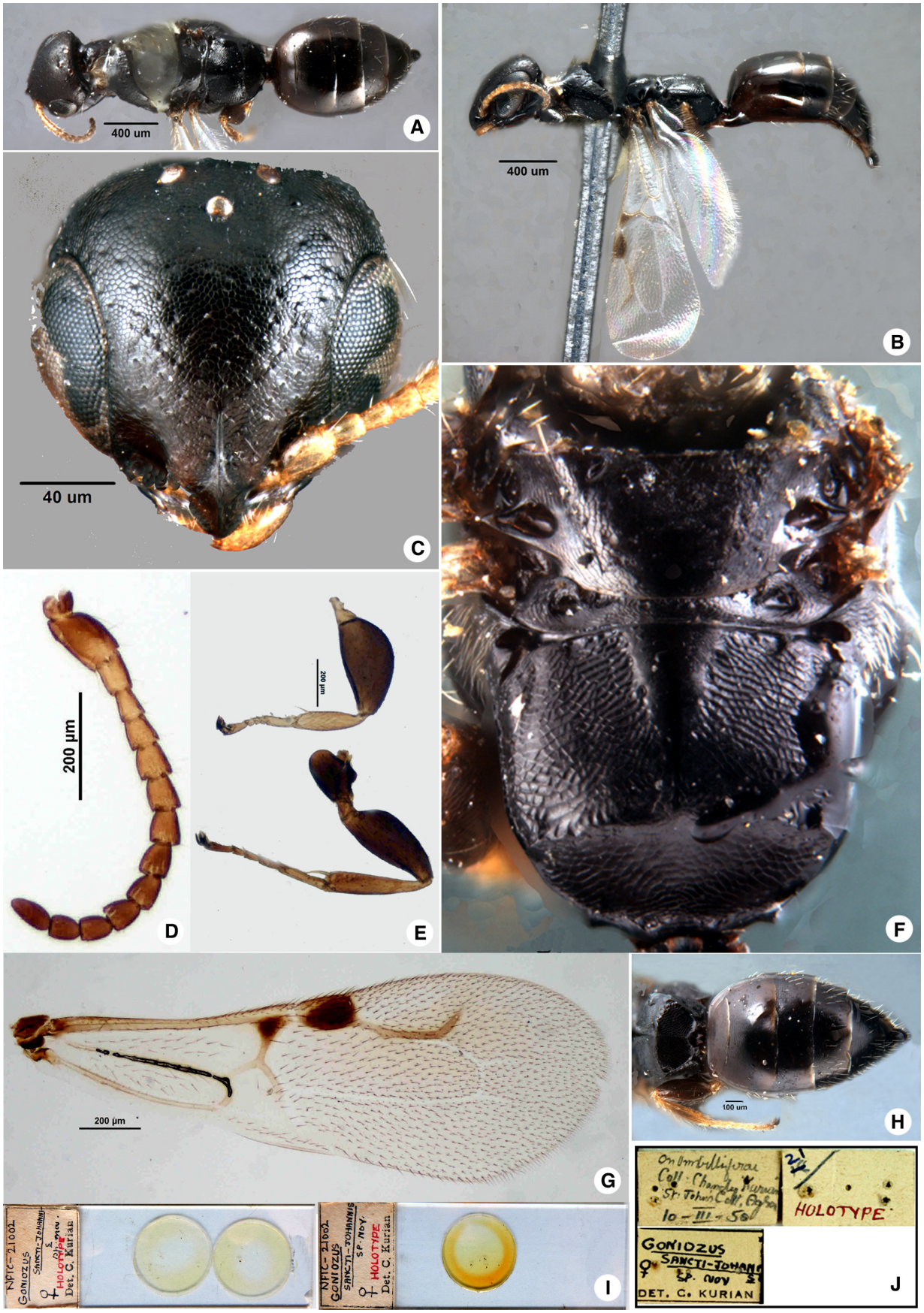

FIGURE 14. A–J. *Goniozus sanctijohannis* Kurian, 1955. Holotype. **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Head, frontal view; **D.** Antenna; **E.** Legs, upper proleg and lower metaleg; **F.** Posterior half of mesonotum and Metapectal-propodeal disc, dorsal view; **G.** Forewing; **H.** Metasoma, dorsal view; **I.** two slides of holotype; **J.** Labels.

pronotal dorsal area; notauli inconspicuous. Metapectal-propodeal disc wider than long; metapostnotal median carina absent; first abdominal spiracle dorsally placed. Tarsal claw simple. Wings hyaline; forewing with pterostigma light brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein present, $1M_2c$ opened. Metasoma polished. Genitalia: Harpe completely divided into dorsal and ventral arms, shorter than gonostipes in dorsal view, dorsal arm with apex rounded, weakly arched inward; gonostipes wide, not covering aedeagal base; apex of cuspis anterior to apex of dorsal arm of harpe; digitus with apex posterior to apex of cuspis, its posterior margin strongly serrated; aedeagus bottle-shaped, its apex posterior to apex of digitus. Female. Unknown.

Material examined. Holotype: [INDIA, *Bihar*], Pusa, 17-I-1921, parasitic on *Thalasodes vevaria* {*Thalassodes veraria*} on litchi leaves.

Type conditions. Holotype partly dissected on slide Nº. 52/B and remaining rested on the pin. *Pinned*: body complete and intact. Head with right scape and left antenna up to two basal flagellomeres, mesosoma with right pair of wings and right legs. *On slide*: S1 C1—pro and metalegs complete; two similar legs without coxae and femur; one antenna without scape; one forewing.

Remarks. In the original publication, Kurian (1955) described a female as the holotype, but the description is given under the heading 'Male'. We dissected the genitalia of the holotype, which is marked by Kurian as 'male', and found it to be a male. So, we concluded that the heading of the original description ('female') was Kurian's mistake. Male genitalia and some sclerites of the last segment of the metasoma are mounted on slide S1.

Hosts. Lepidoptera: Geometridae: *Thalassodes veraria* (Guenée).

Genus *Odontepyris* Kieffer, 1904a

Odontepyris Kieffer, 1904a, 1: 378.
Type species: *Goniozus transvaalensis* Buysson, 1897 by original monotypy.

Kurian (1954b, 1955) described three species of *Odontepyris*, *O. argyriae, O. batrae* and *O. cirphi*. Later, Polaszek & Krombein (1994) synonymized *Trissomalus* Kieffer, 1905 with *Odontepyris* and transferred one species (*T. indicus*) described by Kurian (1954b) to *Odontepyris*. Polaszek & Krombein (1994) also transferred to *Odontepyris* from *Goniozus* the species *G. hypsipylae*, which was originally described by Kurian (1955). So, *Odontepyris* now has five species described by Kurian.

16. *Odontepyris argyriae* Kurian, 1954b

Fig. 16, A–J

Odontepyris argyriae Kurian, 1954b, 3: 437–439, Figs: 40–45.
Type locality: Dharwar, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 5.75 mm. General colour black. Head wider than long; frons strongly coriaceous; ocelli distinct, crossing to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin angled, longer than lateral ones; median clypeal carina high in lateral view; mandible tetradentate; antenna with sparse pubescence, scape 2.0× longer than pedicel, pedicel as long as first flagellomere. Pronotum coriaceous; mesonotum shorter than pronotal dorsal area; notauli absent. Metapectal-propodeal disc wider than long; metapostnotal median carina present; first abdominal spiracle dorsolaterally placed. Tarsal claw trifid. Wings hyaline; forewing with pterostigma light brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein absent, $1M_{2s}c$ closed, small and oval. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Karnataka*], Dharwar, S. A. Raja Rao coll., parasitic on sugarcane borer *Argyria sticticraspis*.

Type conditions. Holotype partly dissected on slide Nº. 138/B and remaining rested on the pin. *Pinned*: Complete body, head with left antennae (without apical flagellomere) and right (with scape only); mesosoma with two pairs of wings, legs (left pro-, meso- and metalegs without tibiae and tarsi; right with pro- and metacoxa, mesoleg without tibia and tarsi) and metasoma, pinned at pronotum. *On slides*: S1 C1—one antenna; one leg, without coxa, and with two distal tarsi. S2 C1—nine apical flagellomeres; two forewings. S2 C2—one proleg without coxa; three antennal segments (pedicel and 1–2 flagellomeres).

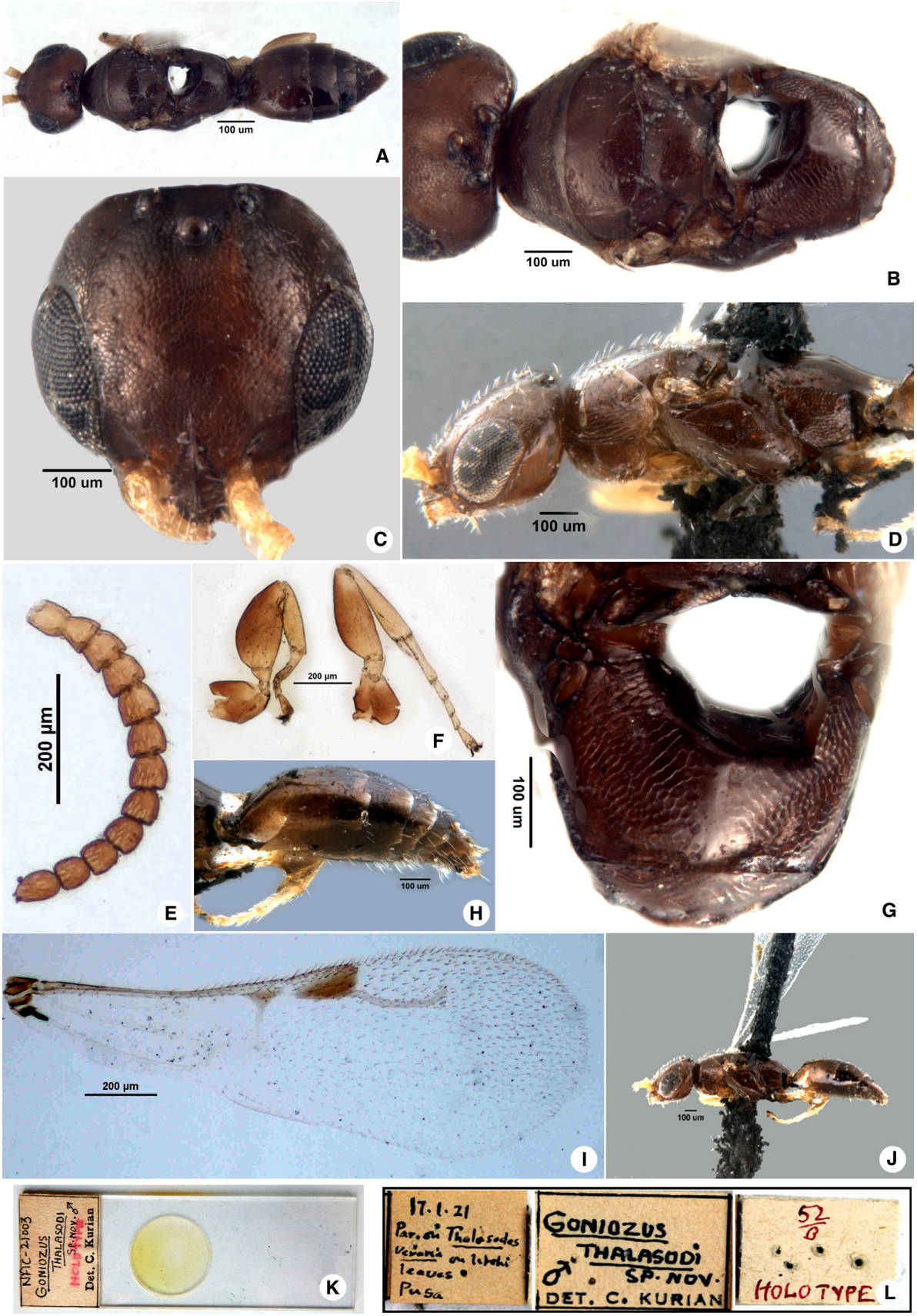

FIGURE 15. A–L. *Goniozus thalasodi* Kurian, 1955. Holotype. **A.** Habitus, dorsal view; **B.** Part of head and mesosoma, dorsal view; **C.** Head, frontal view; **D.** Head and mesosoma, lateral view; **E.** Antenna; **F.** Legs, left proleg and right metaleg; **G.** Metapectal-propodeal disc, dorsal view; **H.** Metasoma, lateral view; **I.** Forewing; **J.** Habitus, lateral view, before remounting; **K.** Slide of holotype; **L.** Labels.

Remarks. Both the slides (S1 and S2) are labeled as "Holotype", but the body parts mounted on S1 does not match the pinned holotype, and is likely non-type material. However, in S2, all parts under cover one (S2 C1) and cover two (S2 C2) match the holotype, with the addition of two forewings from non-type material.

Hosts. Lepidoptera: Pyralidae: *Chilo infuscatellus* Snellen (senior synonym of *A. sticticraspis*).

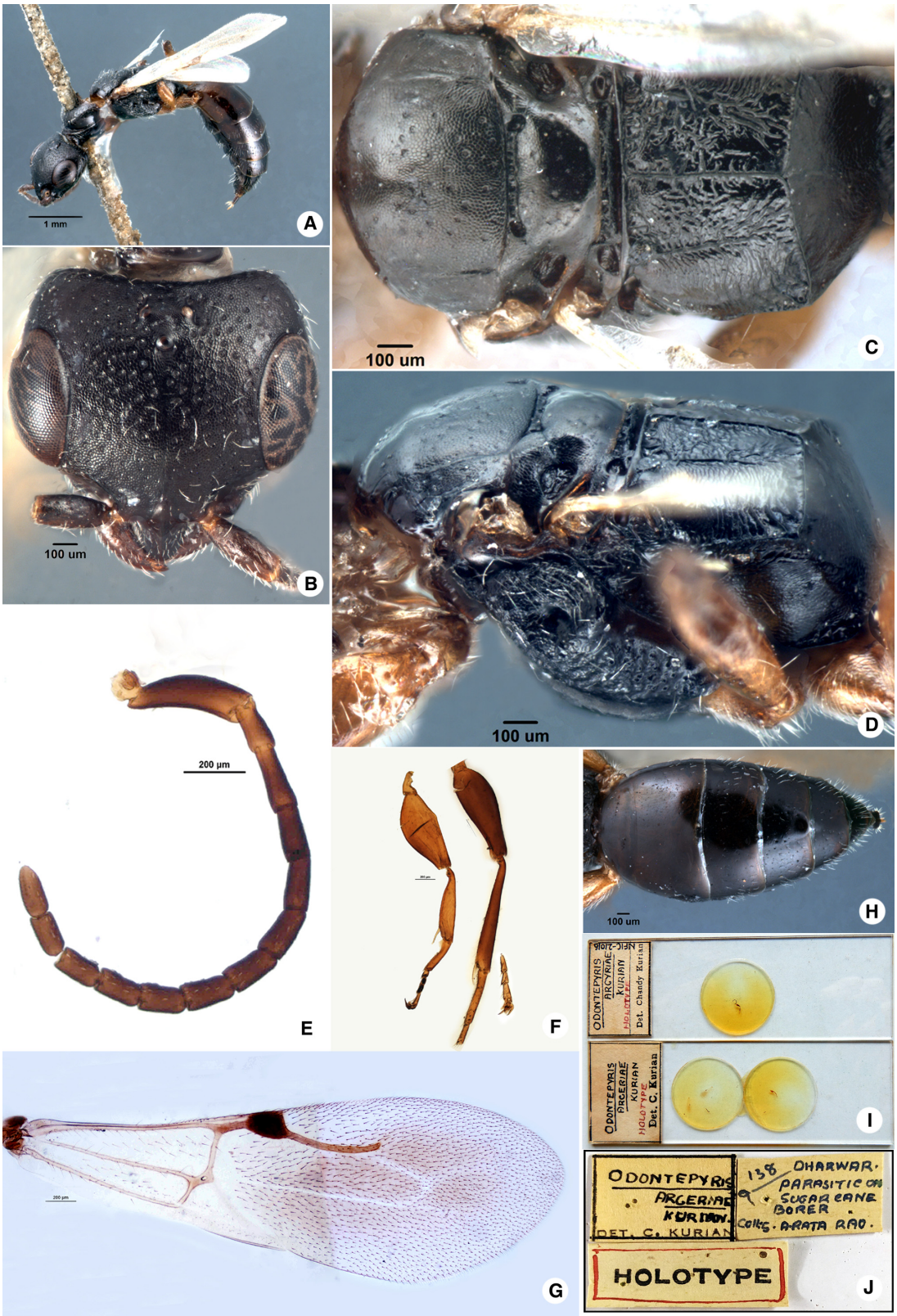

FIGURE 16. A–J. *Odontepyris argyriae* Kurian, 1954b. Holotype. **A.** Habitus, lateral view; **B.** Head, frontal view; **C.** Mesosoma, dorsal view; **D.** Mesosoma, lateral view; **E.** Antenna; **F.** Legs, left proleg and right metaleg; **G.** Forewing; **H.** Metasoma, dorsal view; **I.** Two slides of holotype; **J.** Labels.

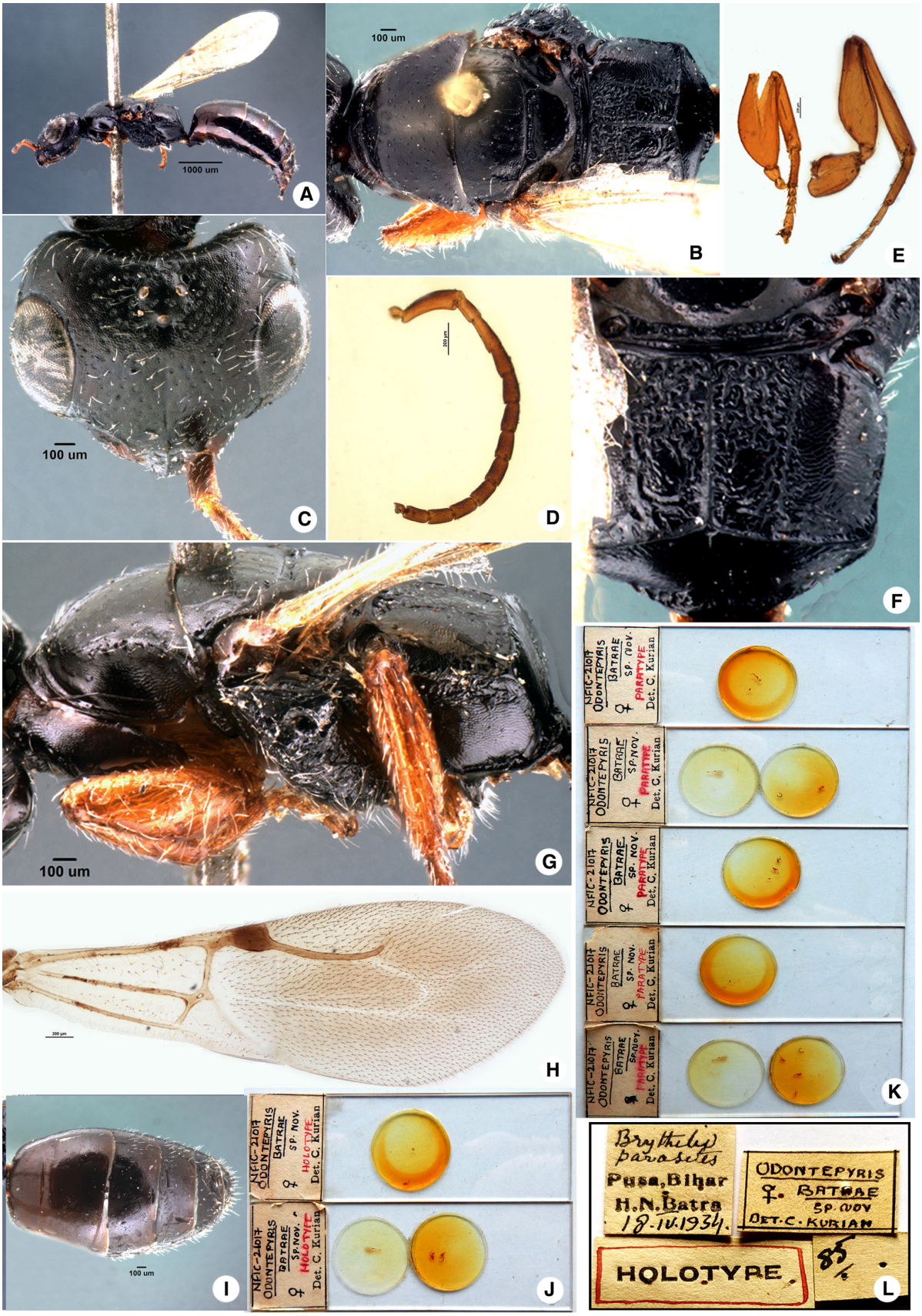

FIGURE 17. A–L. *Odontepyris batrae* Kurian, 1955. Holotype. **A.** Habitus, lateral view; **B.** Mesosoma, dorsal view; **C.** Head, frontal view; **D.** Antenna; **E.** Legs, left pro- and right metaleg; **F.** Posterior part of mesonotum and Metapectal-propodeal disc, dorsal view; **G.** Mesosoma, lateral view; **H.** Forewing; **I.** Metasoma, dorsal view; **J.** two slides of holotype. **K.** Five slides of Paratypes. **L.** Labels of holotype.

17. *Odontepyris batrae* Kurian, 1955
Fig. 17, A–L

Odontepyris batrae Kurian, 1955, 4: 130–132, Figs: 237–242.
Type locality: Pusa, Bihar, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length 5.20 mm–6.50 mm. General colour black. Head wider than long; frons strongly coriaceous; ocelli distinct, anterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; median clypeal carina high in lateral view; mandible tetradentate; antenna with sparse pubescence, scape 2.2× longer than pedicel, pedicel shorter than first flagellomere. Pronotum coriaceous; mesonotum shorter than pronotal dorsal area; notauli absent. Metapectal-propodeal disc wider than long; metapostnotal median carina present; first abdominal spiracle dorsolaterally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma light brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein absent, $1M_2c$ closed, small and subtriangular. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Bihar*], Pusa, 18-IV-1934, H.N. Batra [coll.,] bethylid parasite. Paratypes: 3♀, same data of the holotype.

Type conditions. Holotype partly dissected on slide Nº. 85/B and remaining rested on the pin. *Pinned*: Body complete, head (with left antenna having scape, pedicel and first flagellomere), mesosoma (with left wings, pro- and mesolegs and right coxa) and metasoma. *On slides*: S1 C1—one mesoleg with detached coxae nearby. S2 C1—one forewing and one hind wing. S2 C2—one proleg without coxa and one metaleg; one antenna without apical flagellomeres. Paratypes partly dissected on slides and remaining rested on the pins. *Pinned*: Body complete, with right wings, partial antennae, and legs pinned separately. *On slides*: S3 C1—two legs. S4 C1—one leg; one antenna; S4 C2—one forewing and one hind wing. S5 C1—two legs. S6 C1—one coxa. S7 C1—three legs (one without coxa); one antenna. S7 C2—one forewing and one hind wing.

Hosts. Unknown.

18. *Odontepyris cirphi* Kurian, 1955
Fig. 18, A–J

Odontepyris cirphi Kurian, 1955, 4: 130, 132, 133, Figs: 243–248.
Type locality: Pusa, Bihar, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 4.0 mm. General colour black. Head wider than long; frons strongly coriaceous; ocelli distinct, crossing to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin angled, longer than lateral ones; median clypeal carina high in lateral view; mandible tridentate; antenna with sparse pubescence, scape 2.0× longer than pedicel, pedicel shorter than first flagellomere. Pronotum coriaceous; mesonotum shorter than pronotal dorsal area; notauli absent. Metapectal-propodeal disc wider than long; metapostnotal median carina present, weak; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein absent, $1M_2c$ closed, small and oval. Metasoma lost. Male. Unknown.

Material examined. Holotype: [INDIA, *Bihar*], Pusa, 17-VII-1914, T.B.F., parasitising *Cirphis* larvae.

Type conditions. Holotype partly dissected on slide Nº. 69/B and remaining rested on the pin. *Pinned*: Head, without antennae, and mesosoma with left hind wing, left proleg and mesocoxa, right meso- and metacoxae). *On slides*: S1 C1—one forewing and one hind wing. S1 C2—two legs without coxae; two coxae; one antenna.

Remarks. The metasoma of the holotype is missing.

Hosts. Lepidoptera: Noctuidae: *Cirphis* sp.

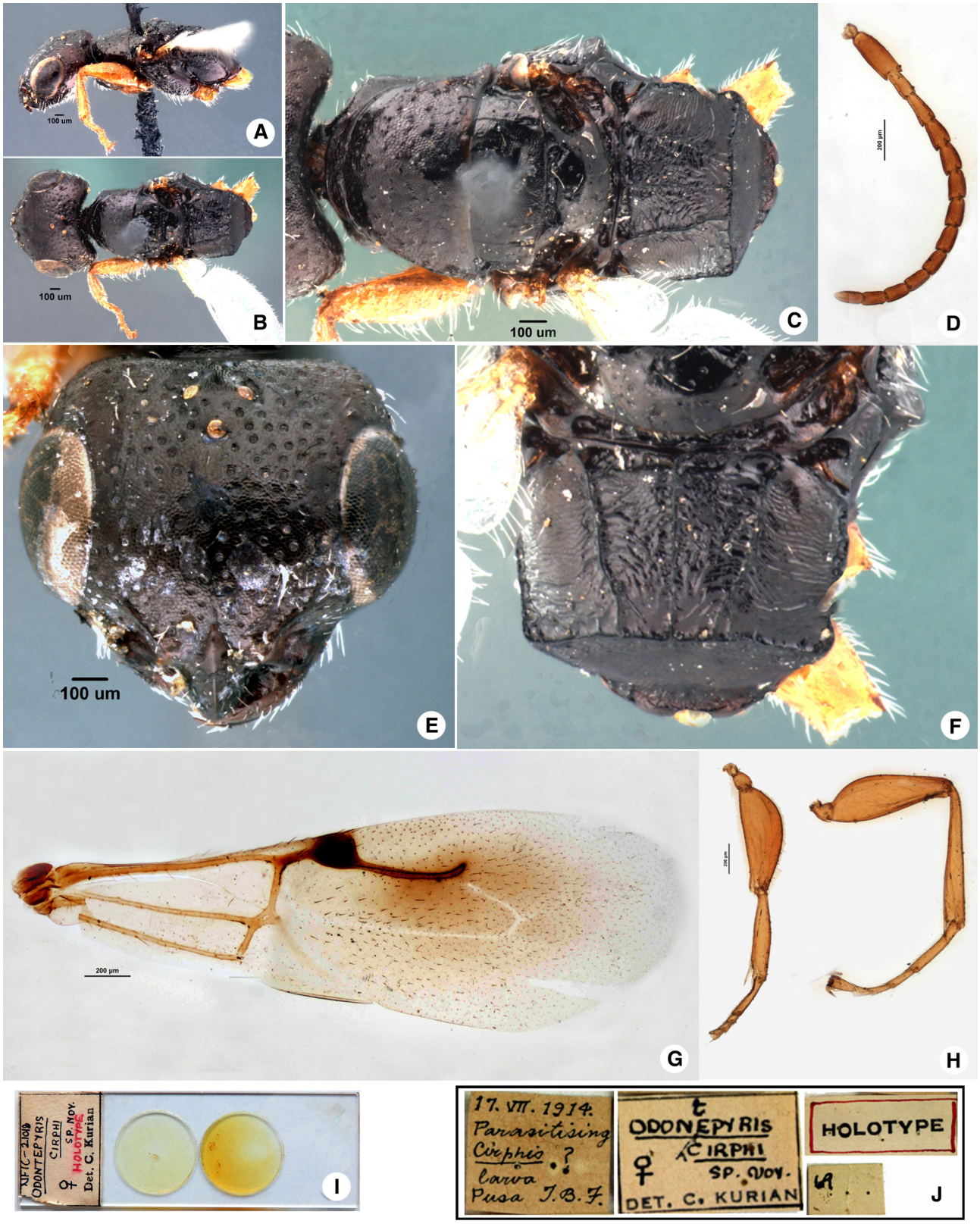

FIGURE 18. A–J. *Odontepyris cirphi* Kurian, 1955. Holotype. **A.** Head and mesosoma, lateral view; **B.** Head and mesosoma, dorsal view; **C.** Mesosoma, dorsal view; **D.** Antenna; **E.** Head, frontal view; **F.** Posterior part of mesonotum and Metapectal-propodeal disc, dorsal view; **G.** Forewing; **H.** Legs, left, pro- and right metaleg; **I.** Slide of holotype; **J.** Labels.

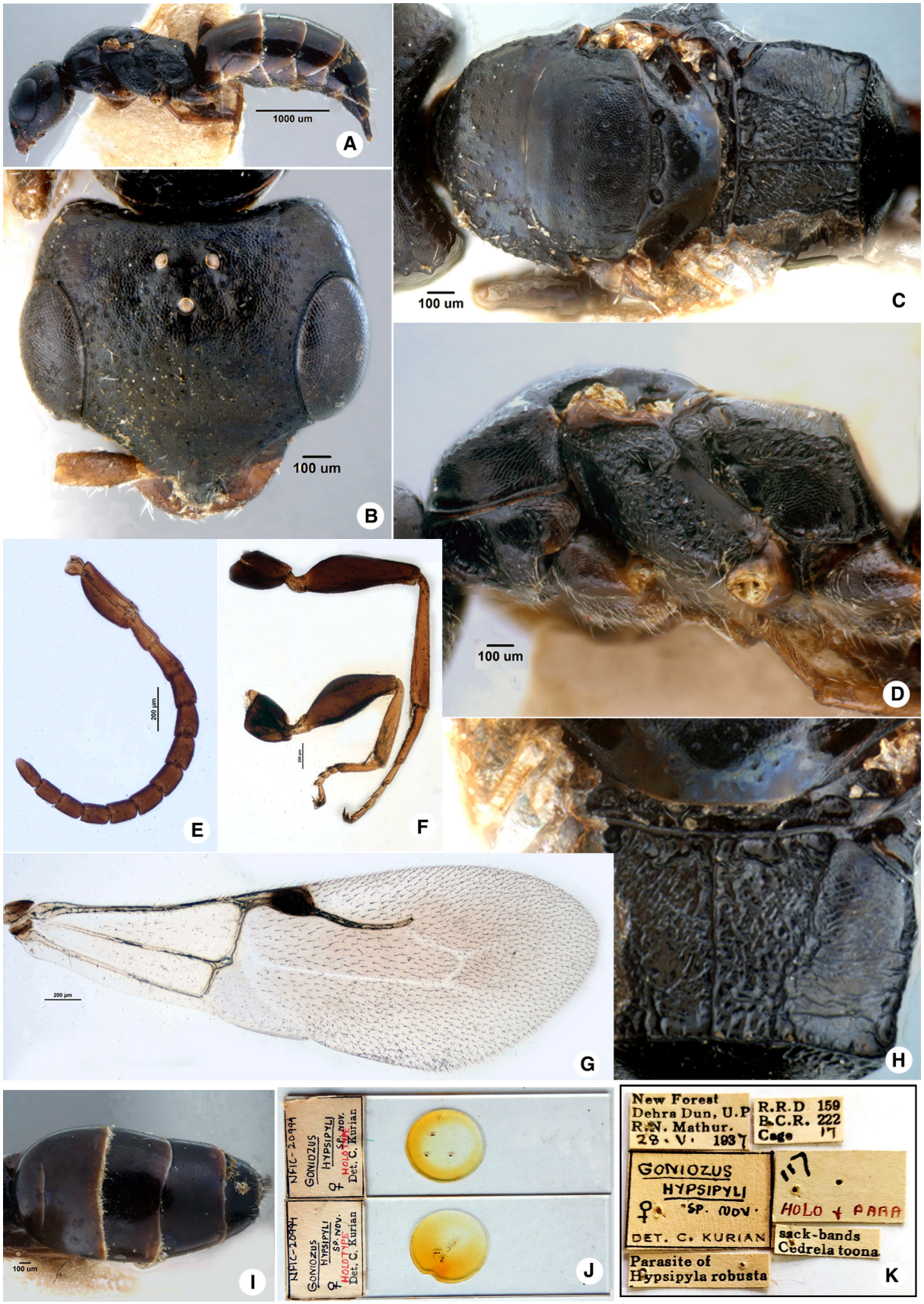

FIGURE 19. A–K. *Odontepyris hypsipylae* (Kurian, 1955). Holotype. **A.** Habitus, lateral view; **B.** Head, frontal view; **C.** Mesosoma, dorsal view; **D.** Mesosoma, lateral view; **E.** Antenna; **F.** Legs, left pro- and right metaleg; **G.** Forewing; **H.** Posterior part of mesonotum and Metapectal-propodeal disc, dorsal view; **I.** Metasoma, dorsal view; **J.** Two slides of holotype; **K.** Labels.

19. *Odontepyris hypsipylae* (Kurian, 1955)
Fig.19, A–K

Goniozus hypsipylae Kurian, 1955, 4: 114, 119–121, Figs: 194–199.
Type locality: Dehradun, Uttarakhand, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length 5.0 mm. General colour black with apex of metasoma reddish-brown. Head wider than long; frons strongly coriaceous; ocelli distinct, anterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; median clypeal carina high in lateral view; antenna with sparse pubescence, scape 1.95× longer than pedicel, pedicel as long as first flagellomere. Pronotum coriaceous; mesonotum as long as pronotal dorsal area; notauli absent. Metapectal-propodeal disc wider than long; metapostnotal median carina present; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma light brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein absent, $1M_2c$ closed, small and subtriangular. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Uttarakhand*,] Dehra Dun {Dehradun}, New Forest, 28-V-1937, parasitic on *Hypsipyla robusta,* sack-bands *Cedrela toona,* U.P., R.N. Mathur coll[s]., RRD 159, BCR 222, Cage 17. Paratype: 1♀, same data of holotype.

Type conditions. Holotype partly dissected on slide Nº. 117/B and remaining rested on the card. *Pinned*: Body complete and intact, glued from left side; head with left scape; mesosoma with both metalegs, left pro- and mesolegs glued; metasoma intact. *On slides*: S1 C1—one pro and one metaleg; one antenna complete; one forewing and one hind wing. S2 C1—two mesolegs—one with two and another with one apical tarsal segment missing—and one metaleg, all without coxae; antenna with apical flagellomeres missing; one forewing and two hind wings. Paratype partly dissected on slide Nº. 118/B and remaining rested on the pin. *Pinned*: Complete and intact specimen with right meso- and metalegs missing.

Remarks. The holotype and paratype are mounted on different cards but on the same pin, with Nº. 117. Though the holotype is not specifically marked, we concluded that the top specimen is the holotype, because the body parts on the pin match the mounted parts in the slides and are convergent with the description provided by Kurian. The other, lower specimen is the paratype.

Hosts. Lepidoptera: Pyralidae: *Hypsipyla robusta* (Moore).

20. *Odontepyris indicus* (Kurian, 1954b)
Fig. 20, A–L

Trissomalus indicus Kurian, 1954b, 3: 426–429, Figs: 19–23.
Type locality: Bangalore, Karnataka, India (♀ holotype, NFIC-FRI, examined).

Diagnosis. Female. Length 5.3 mm. General colour black. Head wider than long; frons coriaceous; ocelli distinct, anterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin angled, longer than lateral ones; median clypeal carina high in lateral view; mandible tetradentate; antenna with dense pubescence, scape 2.6× longer than pedicel, pedicel longer than first flagellomere. Pronotum coriaceous; mesonotum as long as pronotal dorsal area; notauli absent. Metapectal-propodeal disc wider than long; metapostnotal median carina present. Tarsal claw bifid. Wings hyaline; forewing with pterostigma light brown, $2R1_2c$ cell opened, $Rs+M_2v$ vein absent, $1M_2c$ opened. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Karnataka*,] Bangalore, 16-IX-1950, on sugarcane borer, B. Krishnamoorti coll.

Type conditions. Holotype partly dissected on slide Nº. 141/B and remaining rested on the pin. *Pinned*: Body complete, intact, head with left antenna, mesosoma with left pair of wings, all the left legs and right metaleg and metasoma. *On slides*: S1 C1—one forewing and one hind wing. S1 C2—one proleg and one metaleg; one antenna.

Hosts. Sugarcane borer (unidentified species).

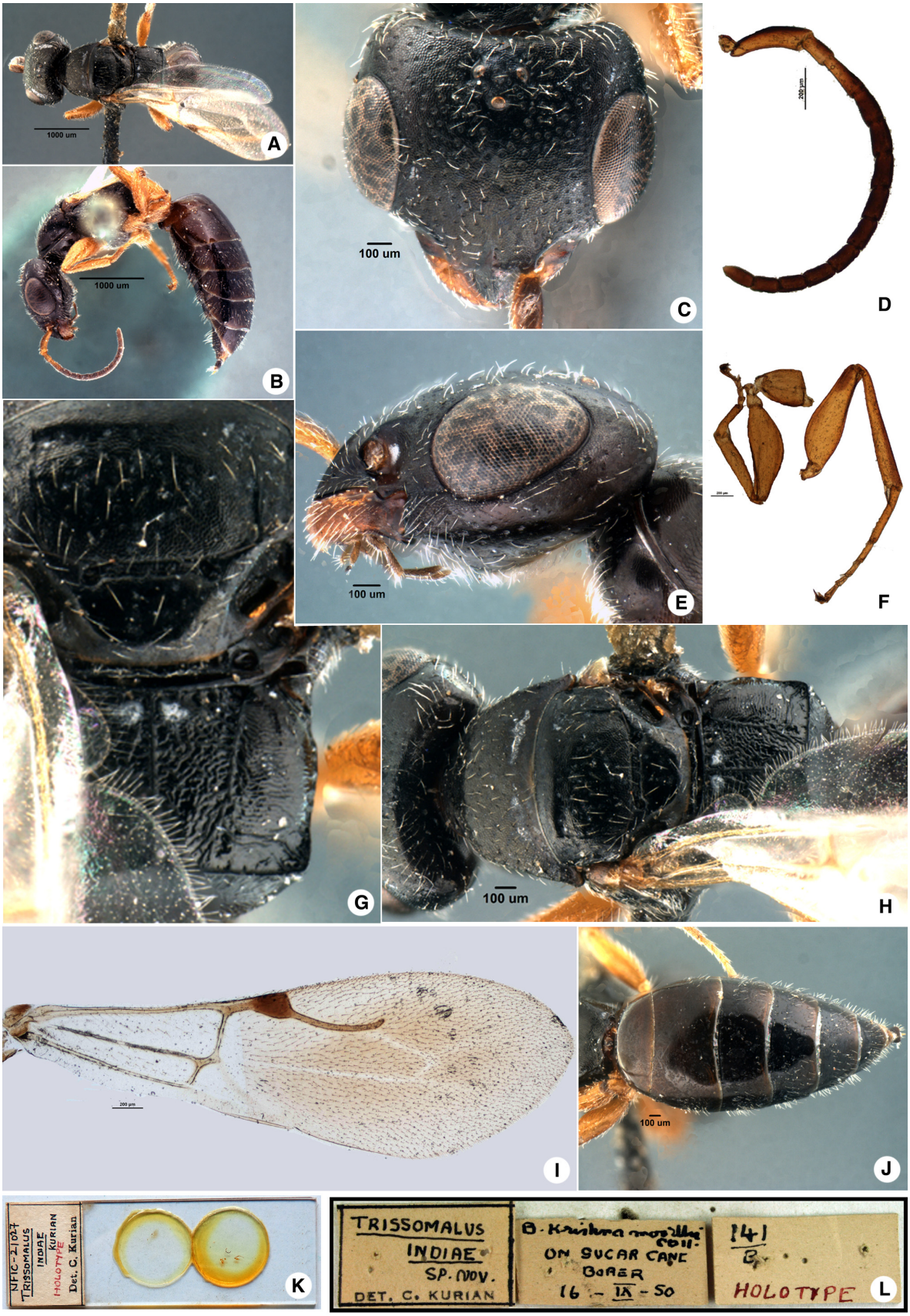

FIGURE 20. A–L. *Odontepyris indicus* (Kurian, 1954b). Holotype. **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Head, frontal view; **D.** Antenna; **E.** Head, lateral view; **F.** Legs, left pro- and right hindleg; **G.** Posterior part of mesonotum and Metapectal-propodeal disc, dorsal view; **H.** Part of head and mesosoma, dorsal view; **I.** Forewing; **J.** Metasoma, dorsal view; **K.** Slide of holotype; **L.** Labels.

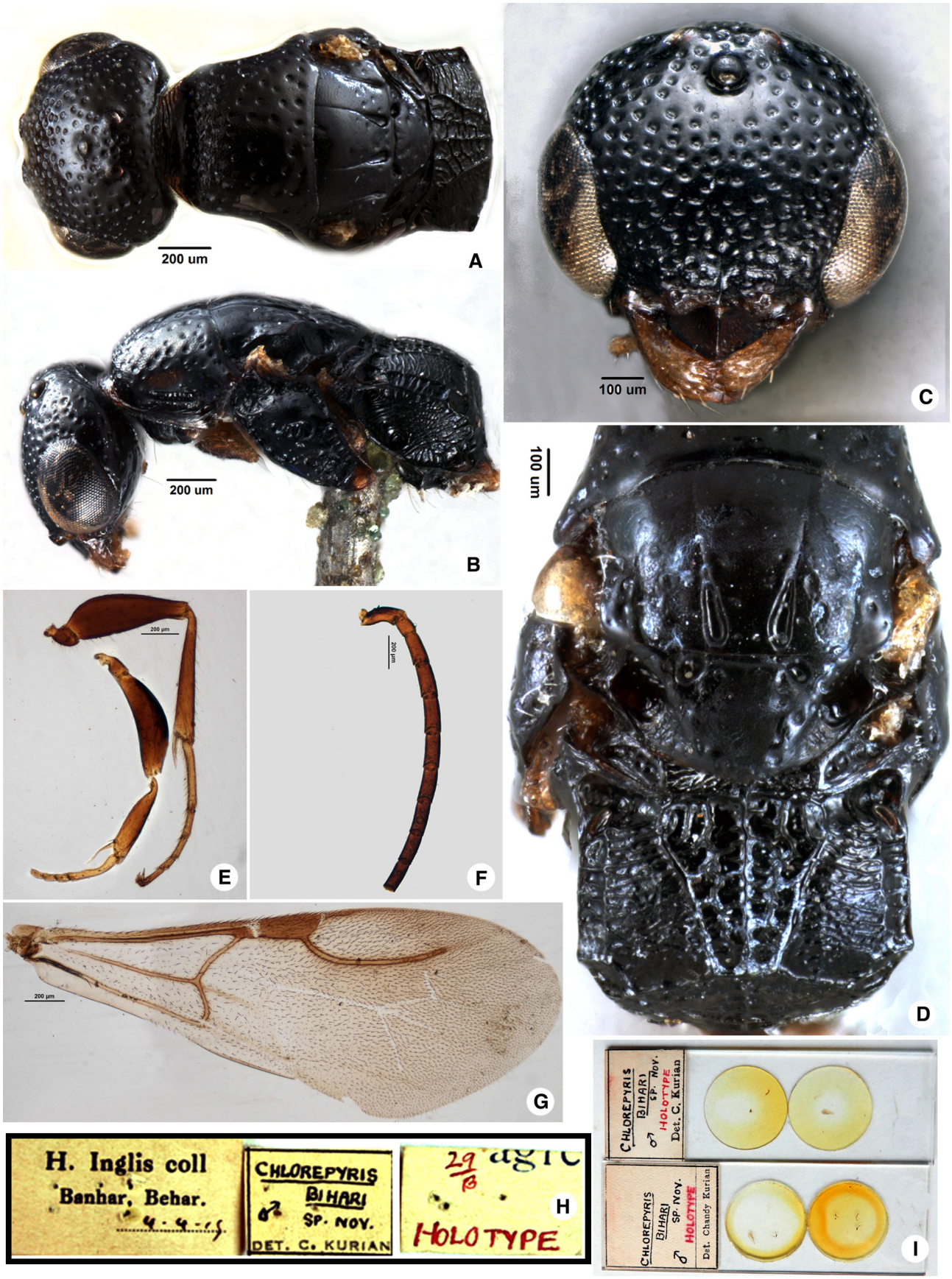

FIGURE 21. A–I. *Chlorepyris biharina* Kurian, 1955. Holotype. **A.** Head and mesosoma, dorsal view; **B.** Head and mesosoma, lateral view; **C.** Head, frontal view; **D.** Mesosoma, dorsal view; **E.** Legs, left pro- and right hindleg; **F.** Antenna; **G.** Forewing; **H.** Labels of holotype; **I.** Two slides of holotype.

Subfamily Epyrinae Kieffer, 1914

Type genus: *Epyris* Westwood, 1832

Genus *Chlorepyris* Kieffer, 1913

Chlorepyris Kieffer, 1913, 7: 108.
Type species: *Epyris viridis* Kieffer, 1911 by subsequent designation.

Kurian (1954b, 1955) described four species of *Chlorepyris*, *C. biharina, C. mackenziei, C. puseana* and *C. sanctipauli*. Here, we transfer *C. mackenziei* Kurian, 1955 to *Epyris* Westwood, 1832, and *C. sanctipauli* Kurian, 1954b to *Trachepyris* Kieffer, 1905. So, *Chlorepyris* now has two species described by Kurian.

21. *Chlorepyris biharina* Kurian, 1955
Fig. 21, A–I

Chlorepyris biharina Kurian, 1955, 4: 101–103, Figs: 124–129.
Type locality: Bihar, India (♂ holotype, NFIC-FRI).

Diagnosis. Male. Length 3.8 mm. General colour black. Head as long as wide; frons weakly coriaceus; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, longer than lateral ones; mandible pentadentate; antenna with dense pubescence, scape 1.9 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, longer than parapsidal signum; mesoscuto-mesoscutellar suture sulcate, smooth, posterior margin incurved medially. Metapectal-propodeal disc wider than long; metapostnotal median carina present; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma dark brown; hind wing with five hamuli. Metasoma and genitalia lost. Female. Unknown.

Material examined. Holotype: [INDIA,] *Bihar*, Banhar, 4-IV-1919, H. lnglis coll.

Type conditions. Holotype partly dissected on slide Nº. 29/B and remaining rested on the pin. *Pinned*: Head and mesosoma (with right coxa attached). *On slides*: S1 C1—one forewing, one hind wing and one metaleg without coxa. S1 C2—one proleg, one metaleg both with detached coxae; one antenna with scape, pedicel and eight flagellomeres. S2 C1—one for leg without coxa; antenna with scape, pedicel and six flagellomeres. S2 C2—one forewing and one hind wing.

Remarks. The metasoma and genitalia of the holotype are missing.

Hosts. Unknown.

22. *Chlorepyris pusana* Kurian, 1955
Fig. 22, A–F

Chlorepyris pusana Kurian, 1955, 4: 101, 104, 105, Figs: 136–140.
Type locality: Pusa, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length 2.6 mm. General colour black. Head longer than wide; frons coriaceus; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, longer than lateral ones; antenna with dense pubescence, scape 1.4 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, weak, longer than parapsidal signum; mesoscuto-mesoscutellar suture sulcate, smooth. Metapectal-propodeal disc as long as wide; metapostnotal median carina present. Tarsal claw bifid. Wings hyaline; forewing with pterostigma dark brown. Metasoma lost. Male. Unknown.

Material examined. Holotype: [INDIA, *Bihar*,] Pusa, 5-V-1922, C. S. Misra coll.

Type conditions. Holotype partly dissected on slide Nº. 99/B and rest of the body which was pinned is missing,

only its labels are present. *On slides*: S1 C1—head with complete antenna. S2 C1—one antenna without scape; two prolegs—one without coxa, one meso and one metaleg all without coxae; one forewing.

Remarks. The pinned body parts of holotype (mesosoma and metasoma) are missing.

Hosts. Unknown.

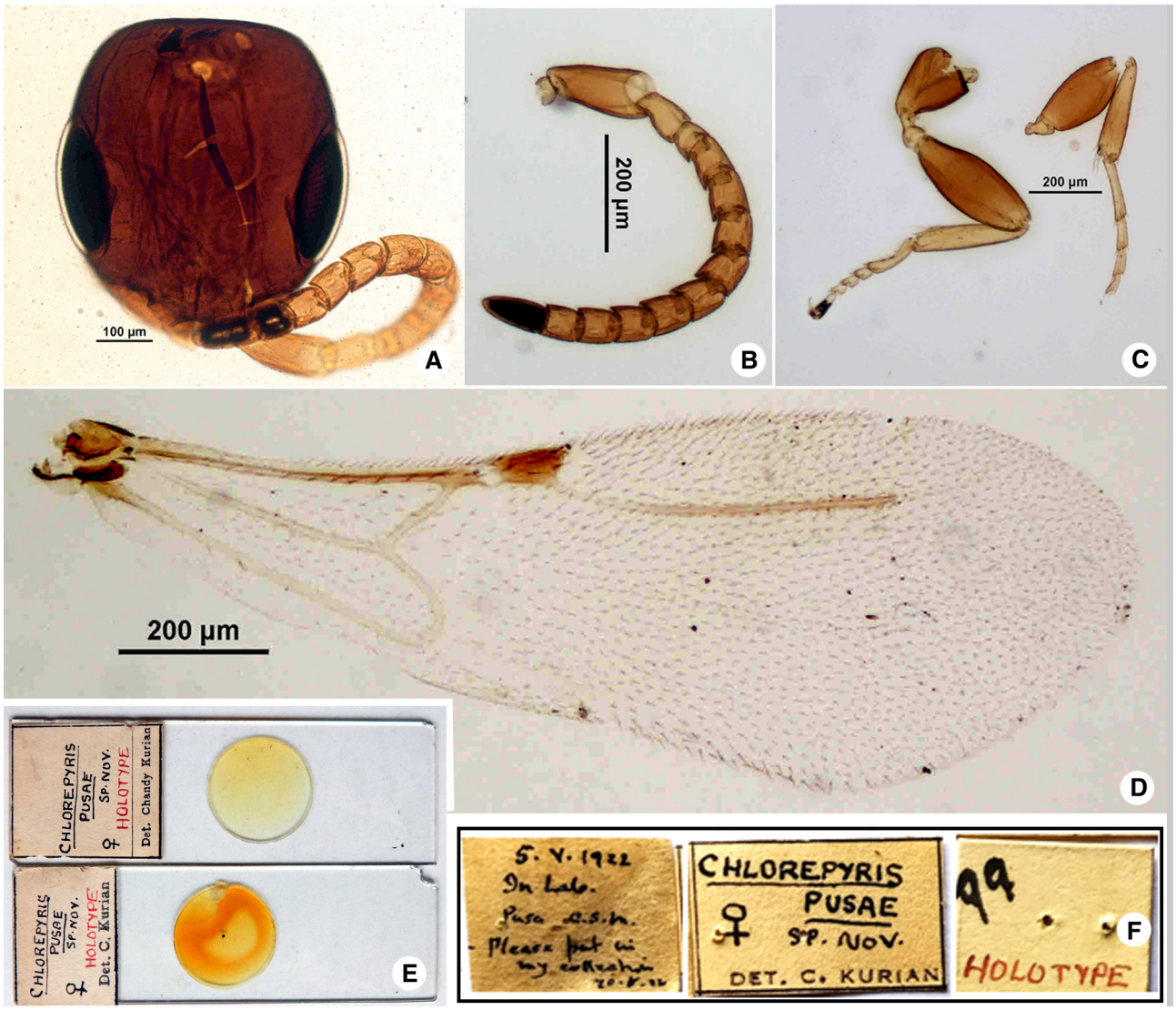

FIGURE 22. A–F. *Chlorepyris pusana* Kurian, 1955. Holotype. **A.** Head in frontal view; **B.** Antenna; **C.** Legs, left pro- and right mesoleg; **D.** Forewing; **E.** Two slides of holotype; **F.** Labels.

Genus *Epyris* Westwood, 1832

Epyris Westwood, 1832, 1: 129.
Type species: *Epyris niger* Westwood, 1832 by original monotypy.

Kurian (1955) described five species of *Epyris*, *E. agrensis*, *E. delhiensis*, *E. duttai*, *E. manii* and *E. patnae*. Azevedo *et al.* (2018) synonymized *Neodisepyris* Kurian, 1955 with *Epyris* and transferred all five species originally described by Kurian (1955) under *Neodisepyris* (*N. bombayensis*, *N. duni*, *N. indicae*, *N. pusae* and *N. shishami*) to *Epyris*. Azevedo *et al.* (2018) also synonymized *Rhabdepyris* Kieffer, 1904c with *Epyris* and transferred one species (*R. agraensis*) described by Kurian (1955) to *Epyris*. Here, we transfer the species *E. agraensis* (Kurian, 1955) to *Formosiepyris* Terayama, 2004a and *E. patnae* Kurian 1955 to *Holepyris*. The species *Chlorepyris mackenziei* is transferred here to *Epyris*. So, *Epyris* now has ten species described by Kurian.

23. *Epyris agrensis* Kurian, 1955

Fig. 23, A–E

Epyris agrensis Kurian, 1955, 4: 90–92, Figs: 8185.
Type locality: Agra, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length 5.5 mm–6.0 mm. General colour dark reddish-brown to black. Head as long as wide; frons coriaceus; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, longer than lateral ones; mandible pentadentate; antenna with sparse pubescence, scape 2 × longer than pedicel, pedicel as long as first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, longer than parapsidal signum; mesoscuto-mesoscutellar suture not sulcate. Metapectal-propodeal disc longer than wide; metapostnotal median carina present; first abdominal spiracle laterally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma dark brown; hind wing with four hamuli. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Uttar Pradesh*,] Agra, St John's College, 21-XI-1950, Chandy Kurian coll.

Type conditions. Holotype partly dissected on slide Nº. 20/B and remaining body was rested on the pin but are missing. *Pinned*: Head, mesosoma and metasoma are missing. *On slides*: S1 C1—one mesoleg without coxae, two metalegs—one without coxa and tari. S2 C1—one proleg without coxa; one antenna. S2 C2—one forewing and one hind wing. Paratypes are not present in NFIC-FRI.

Remarks. The pinned body parts (head, mesosoma and metasoma) are missing. Paratypes are not present in NFIC.

Hosts. Unknown.

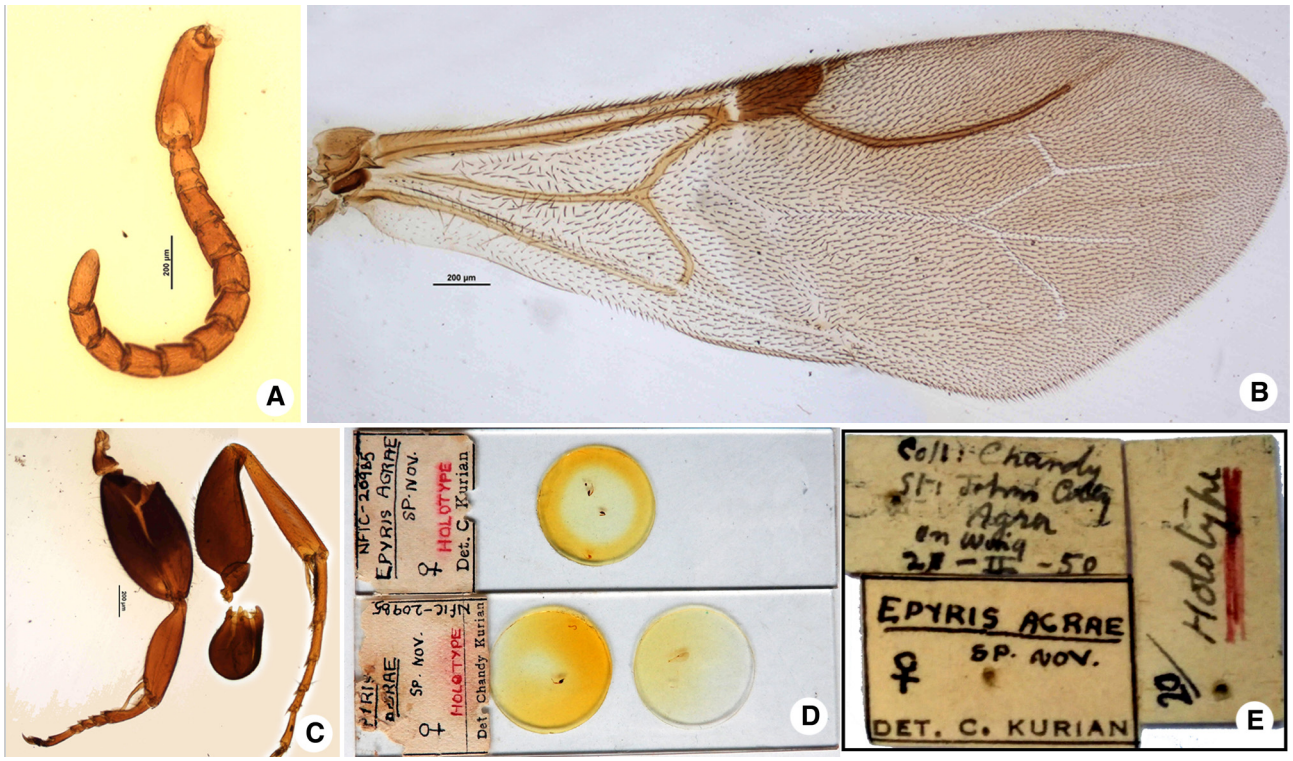

FIGURE 23. A–E. *Epyris agrensis* Kurian, 1955. Holotype. **A.** Antenna; **B.** Forewing; **C.** Legs, left pro- and right metaleg; **D.** Two slides of holotype; **E.** Labels.

24. *Epyris bombayensis* (Kurian, 1955)

Fig. 24, A–K

Neodisepyris bombayensis Kurian, 1955, 4: 105–108, Figs: 141–146.
Type locality: Maharashtra, India (♀ holotype, NFIC-FRI).

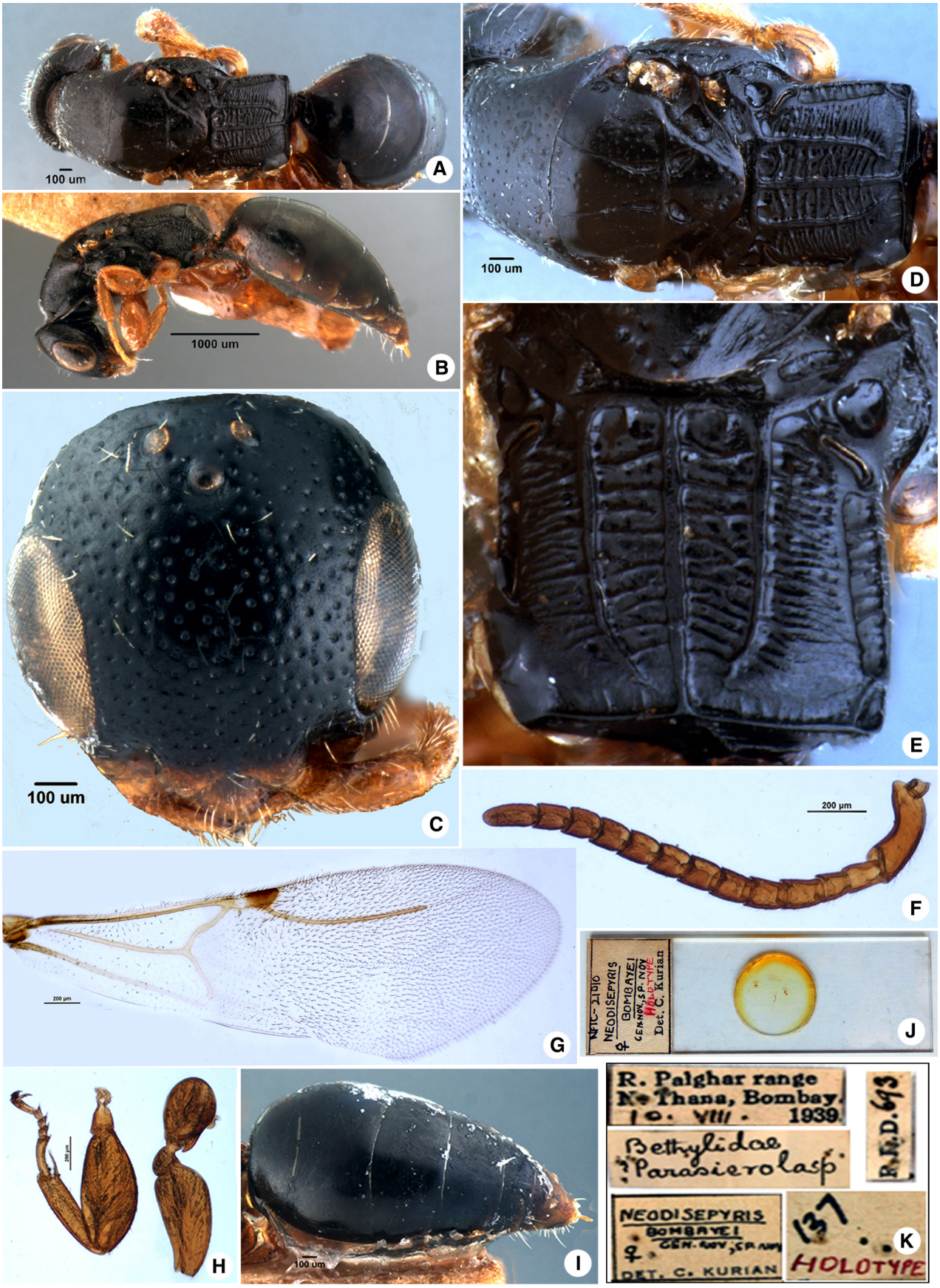

FIGURE 24. A–K. *Epyris bombayensis* (Kurian, 1955). Holotype. **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Head, frontal view; **D.** Mesosoma, dorsal view; **E.** Posterior part of mesonotum and Metapectal-propodeal disc, dorsal view; **F.** Antenna; **G.** Forewing; **H.** Legs, left pro- and right metaleg; **I.** Metasoma, dorsal view; **J.** Slide of holotype; **K.** Labels.

Diagnosis. Female. Length about 4.5 mm. General colour dark brown to black. Head as long as wide; frons weakly coriaceus; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin angled, longer than lateral ones; mandible tetradentate; antenna with dense pubescence, scape 2.5 × longer than pedicel, pedicel as long as first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, as long as parapsidal signum; mesoscuto-mesoscutellar suture not sulcate, foveae oval, large. Metapectal-propodeal disc as long as wide; metapostnotal median carina present; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma dark brown; hind wing with five hamuli. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Maharashtra*,] R. Palghar range, N. Thana {Thane}, Bombay {Mumbai}, 10-VIII-1939, RRD. 693.

Type conditions. Holotype partly dissected on slide Nº. 137/B and remaining parts rested on the pin. *Pinned*: Body without wings, right antenna, and some legs. *On slides*: S1 C1—one antenna; one forewing; one hind wing; one proleg without coxa; one coxa attached to femur; one tibia with tarsomeres; three tarsomeres.

Hosts. Unknown.

25. *Epyris delhiensis* Kurian, 1955

Fig. 25, A–J

Epyris delhiensis Kurian, 1955, 4: 89, 92, 93, Figs: 86–90.
Type locality: Delhi, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 7.3 mm. General colour black. Head as long as wide; frons weakly coriaceus; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; mandible tridentate; antenna with sparse pubescence, scape 2.3 × longer than pedicel, pedicel as long as first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, longer than parapsidal signum; mesoscuto-mesoscutellar suture not sulcate, foveae oval, very small. Metapectal-propodeal disc as long as wide; metapostnotal median carina present; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings nearly hyaline; forewing with pterostigma dark brown; hind wing with four hamuli. Metasoma lost. Male. Unknown.

Material examined. Holotype: [INDIA,] *Delhi* {*National Capital Territory of Delhi*}, 5-IV-1938, Chowdhary coll., Imperial Entomologist.

Type conditions. Holotype partly dissected on slide Nº. 63/B and remaining rested on the pin. *Pinned*: Head and mesosoma intact. Head with right antenna and mesosoma with left pair of wings and legs and left coxa attached. *On slides*: S1 C1—one forewing and one hind wing. S1 C2—one proleg, one metaleg without coxa; one antenna complete.

Remarks. The metasoma of the holotype missing.

Hosts. Unknown.

26. *Epyris duni* (Kurian, 1955)

Fig. 26, A–K

Neodisepyris duni Kurian, 1955, 4: 105–109, Figs: 147–152.
Type locality: Dehradun, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 5.4 mm. General colour black with apex of metasoma reddish-brown. Head as long as wide; frons weakly coriaceus; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; mandible tridentate; antenna with sparse pubescence, scape 2.3 × longer than pedicel, pedicel longer than first flagellomere. Pronotum coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, as long as parapsidal signum; mesoscuto-mesoscutellar suture not sulcate, foveae circular, mid-sized. Metapectal-propodeal disc wider than long; metapostnotal median carina present; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings nearly hyaline; forewing with pterostigma dark brown; hind wing with four hamuli. Metasoma polished. Male. Unknown.

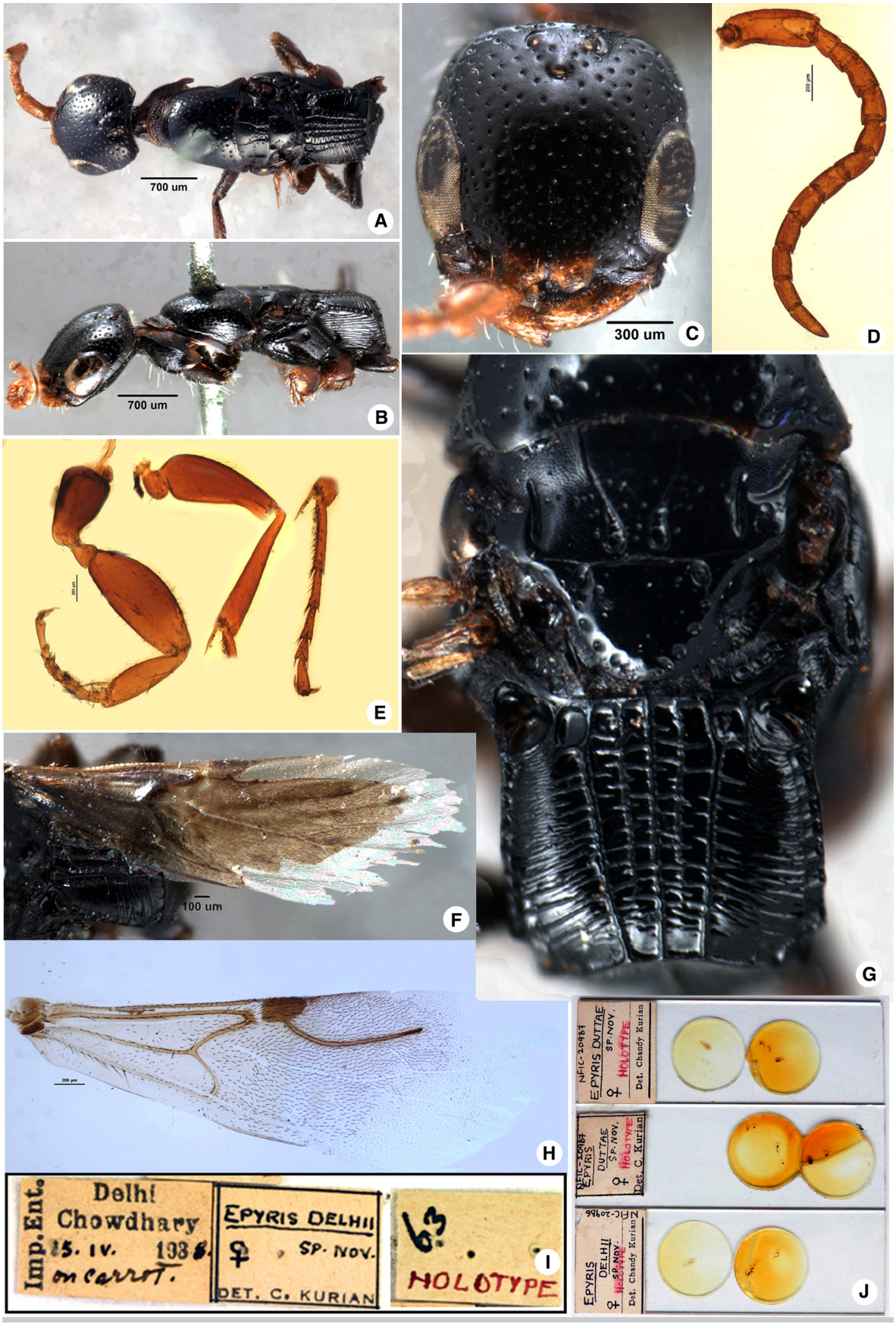

FIGURE 25. A–J. *Epyris delhiensis* Kurian, 1955. Holotype. **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Head, frontal view; **D.** Antenna; **E.** Legs, left pro- and right metaleg; **F.** Forewing, card mounted; **G.** Mesosoma, Metapectal-propodeal disc, dorsal view; **H.** Forewing, slide mounted; **I.** Labels; **J.** Three slides of holotype.

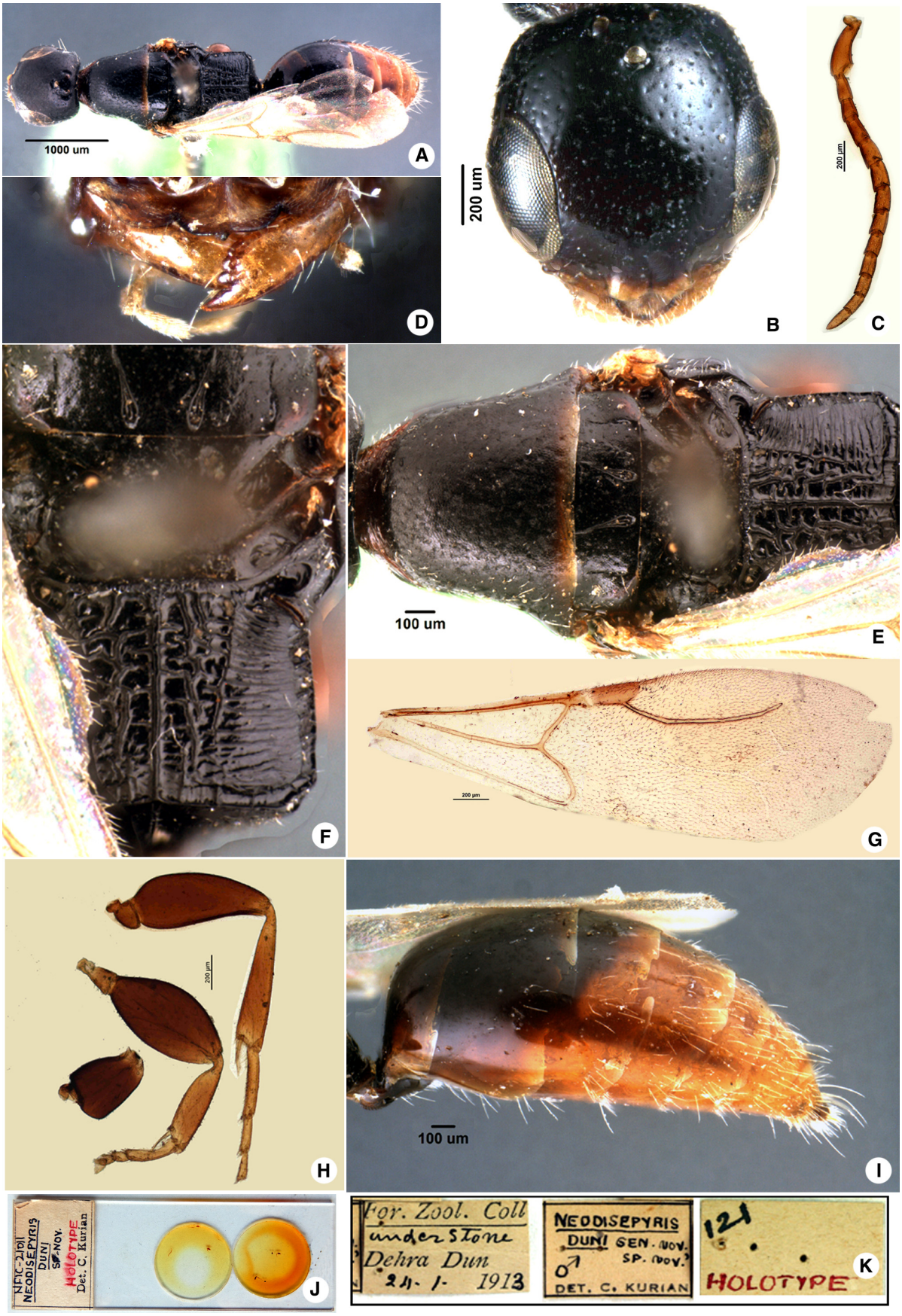

FIGURE 26. A–K. *Epyris duni* (Kurian, 1955). Holotype. **A.** Habitus, dorsal view; **B.** Head, frontal view; **C.** Antenna; **D.** Lower mouth margin showing mandibular dentition; **E.** Mesosoma, dorsal view; **F.** Mesosoma, Metapectal-propodeal disc, dorsal view; **G.** Forewing; **H.** Legs, left pro- and right metaleg; **I.** Metasoma, lateral view; **J.** Slide of holotype; **K.** Labels.

Material examined. Holotype: [INDIA, *Uttarakhand*,] Dehra Dun {Dehradun}, 24-I-1913, forest zoologist. coll., under stone.

Type conditions. Holotype partly dissected on slide Nº. 121/B and remaining rested on the pin. *Pinned*: Complete body with left wings and some parts of legs. *On slides*: S1 C1 -two legs with their coxae near so. S1 C2—one antenna, one forewing and two legs without coxae.

Remarks. Kurian (1955) described the holotype, both on the slides and description, as male, but dissection of the metasoma confirmed it as female. The dissected ovipositor and last tergites of the holotype are mounted on a small recangular cover slip on S1.

Hosts. Unknown.

27. *Epyris duttai* Kurian, 1955

Fig. 27, A–M

Epyris duttai Kurian, 1955, 4: 90, 93–95, Figs: 91–95.
Type locality: Pusa, Bihar, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 5.5 mm. General colour black with apex of metasoma reddish-brown. Head wider than long; frons weakly coriaceus; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, anterior margin angled, longer than lateral ones; antenna with sparse pubescence, scape 2.5 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, as long as parapsidal signum; mesoscuto-mesoscutellar suture not sulcate, foveae oval, mid-sized. Metapectal-propodeal disc as long as wide; metapostnotal median carina present; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma dark brown; hind wing with three hamuli. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Bihar*], Pusa, 13-III-1908, G.R. Dutt coll.

Type conditions. Holotype partly dissected on slide Nº. 64/B, and the remaining body rested on the pin. *Pinned*: Mesosoma with left pair of wings, mesoleg (wings and leg was loosely attached and have been removed and pasted on the pith on which the rest of body is pinned) and metasoma attached. *On slides*: S1 C1—one proleg; one mesoleg, both with detached coxae. S1 C2—head with antenna without apical segment and one proleg. S2 C1—one forewing and one hind wing. S2 C2—antenna complete; one proleg; one metaleg without coxa.

Hosts. Unknown.

28. *Epyris indicae* (Kurian, 1955)

Figs 28, A–N; 51, G–H.

Neodisepyris indicae Kurian, 1955, 4: 109, 110, Figs: 153–158.
Type locality: Pusa, Bihar, India (♂ holotype, NFIC-FRI).

Diagnosis. Male. Length about 3.3 mm. General colour black. Head as long as wide; frons coriaceus; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; antenna with sparse pubescence, scape 2.3 × longer than pedicel, pedicel longer than first flagellomere. Pronotum coriaceous; mesonotum shorter than pronotal dorsal area; notauli incomplete, longer than parapsidal signum; mesoscuto-mesoscutellar suture not sulcate, foveae oval, large. Metapectal-propodeal disc longer than wide; metapostnotal median carina present; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings nearly hyaline; forewing with pterostigma dark brown; hind wing with four hamuli. Metasoma polished. Genitalia: Harpe simple, as long as gonostipes in dorsal view, apex rounded, weakly arched inward; gonostipes wide, covering aedeagal base; cuspis short, completely divided into inner and outer arms, apex of outer arm posterior to apex of inner arm; digitus with apex aligned to apex of outer arm of cuspis, its posterior margin serrated; aedeagus bottle-shaped, its apex aligned to apex of digitus. Female. Unknown.

Material examined. Holotype: [INDIA,] *Bengal* {*Bihar*}, Pusa, XI-1909, A. Murtaza coll.

Type conditions. Holotype partly dissected on slide Nº. 98/B and remaining rested on the pin. *Pinned*: Complete body with left wings and some parts of legs. *On slides*: S1 C1—one forewing and one hind wing. S2 C1—three legs

without coxae; three coxae. S2 C2—one antenna without scape and apical flagellomeres; one leg without coxae and femur.

Remarks. The metasoma of the holotype was dissected, and genitalia mounted on a small circular cover slip on S2.

Hosts. Unknown.

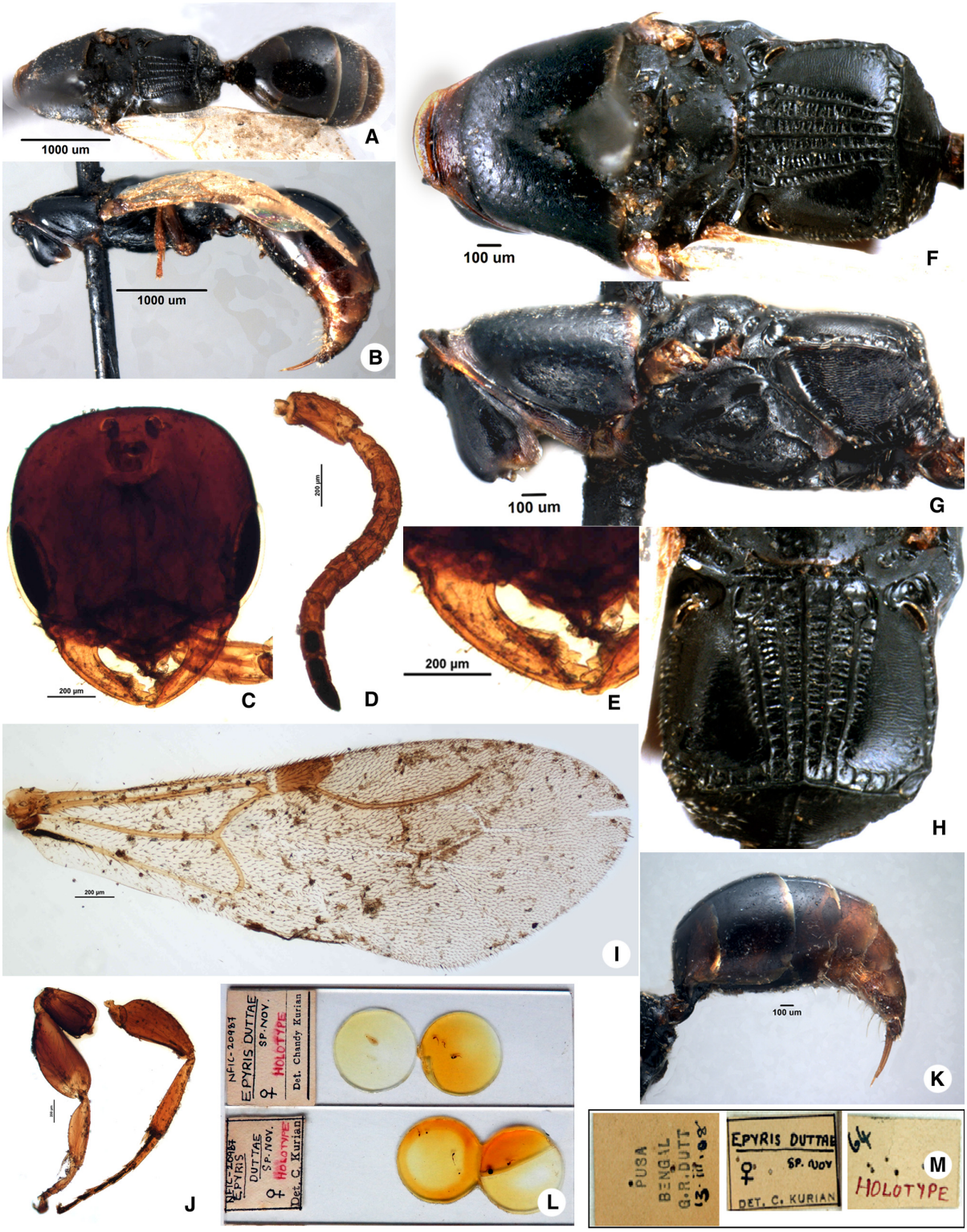

FIGURE 27. A–M. *Epyris duttai* Kurian, 1955. Holotype. **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Head, frontal view; **D.** Antenna; **E.** Lower mouth margin showing mandibular dentition; **F.** Mesosoma, dorsal view; **G.** Mesosoma, lateral view; **H.** Metapectal-propodeal disc, dorsal view; **I.** Forewing; **J.** Legs, left pro- and right metaleg; **K.** Metasoma, lateral view; **L.** Two slides of holotype; **M.** Labels.

FIGURE 28. A–N. *Epyris indicae* (Kurian, 1955). Holotype. **A.** Habitus, lateral view; **B.** Habitus, lateral view, after remounting; **C.** Head, frontal view; **D.** Head and pronotum, lateral view; **E.** Antenna; **F.** Legs, left pro- and right metaleg; **G.** Mesosoma, dorsal view; **H.** Mesosoma, lateral view; **I.** Mouth margin showing mandibular dentition; **J.** Metasoma, dorsal view; **K.** Metasoma, lateral view; **L.** Forewing; **M.** Two slides of holotype; **N.** Labels.

FIGURE 29. A–I. *Epyris mackenziei* (Kurian, 1955) **comb. nov.** Holotype. **A.** Head, frontal view; **B.** Parts of antennae; **C.** Mesosoma, dorsal view; **D.** Mesosoma, lateral view; **E.** Forewing; **F.** Legs, left pro- and right metaleg; **G.** Metasoma; **H.** Three slides of holotype; **I.** Labels.

29. *Epyris mackenziei* (Kurian, 1955) comb. nov.
Fig. 29, A–I

Chlorepyris mackenziei Kurian, 1955, 4: 101, 103, 104, Figs: 130–135.
Type locality: Chapra, Bihar, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 6.8 mm. General colour black with apex of metasoma reddish-brown. Head wider than long; frons weakly coriaceus; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; mandible tridentate; antenna with sparse pubescence, scape 3.0 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, as long as parapsidal signum; mesoscuto-mesoscutellar suture not sulcate, foveae elliptical, very small. Metapectal-propodeal disc wider than long; metapostnotal median carina present; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings nearly brownish; forewing with pterostigma dark brown; hind wing with three hamuli. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA,] *Bengal* {*Bihar*}, Chapra, Mackenzie coll.

Type conditions. Holotype partly dissected on slide Nº. 81/B and remaining rested on the pin. *Pinned*: Mesosoma, without any wing or leg. *On slides*: S1 C1—one proleg without coxae; one femur. S1 C2—head with scape, and metasoma. S2 C1—one forewing and one hind wing. S2 C2—one proleg legs without coxa, second leg without coxa and femur; three fragments of antenna—first with scape, pedicel and first flagellomere, second with four flagellomeres and third with apical eight flagellomeres. S3 C1—four coxae.

Remarks. Kurian (1952, p. 103–104) provided a detailed description of the holotype with drawings. We observed the scape without spine-shaped pectens, mesoscuto-scutellar suture with two foveae, not sulcate, and the forewing with the 2r-rs&Rs_2v long, which supports placing this species in *Epyris*.

Hosts. Unknown.

30. *Epyris manii* Kurian, 1955
Figs 30, A–G; 51, I–J.

Epyris manii Kurian, 1955, 4: 89, 95–97, Figs: 96–106.
Type locality: Agra, India (♂ holotype, NFIC-FRI, examined).

Diagnosis. Male. Length 2.0 mm. General colour dark reddish-brown. Head as long as wide; frons weakly coriaceus; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, longer than lateral ones; antenna with dense pubescence, scape 0.3 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, longer than parapsidal signum; mesoscuto-mesoscutellar suture sulcate, smooth. Metapectal-propodeal disc as long as wide; metapostnotal median carina present, incomplete posteriorly. Tarsal claw bifid. Wings hyaline; forewing with pterostigma dark brown; hind wing with five hamuli. Metasoma polished. Genitalia: Harpe simple, longer than gonostipes in dorsal view, apex pointed, weakly arched inward; gonostipes wide, covering aedeagal base; cuspis elongate, apex anterior to apex of harpe; digitus with apex posterior to apex of cuspis, its posterior margin smooth; aedeagus subtrapezoidal, its apex anterior to apex of digitus. Female. Morphologically similar to male, except for genitalia.

Material examined. Holotype: [INDIA, *Uttar Pradesh*,] Agra, St John's College, 10-IX-1949, Chandy Kurian coll. Allotype: ♀, same data of holotype, except 1-I-1950.

Type conditions. Holotype completely dissected on slide Nº. 9/B. *On slides*: S1 C1—one proleg, one mesoleg without coxa and one metaleg; one antenna complete; two forewings one with basal portion missing. S1 C2—three legs and one antenna complete. S2 C1—head broken; mesosoma broken into 3–4 pieces, scattered; metasoma intact. Allotype completely dissected on slide Nº. 19/B. *On slides*: S3 C1—head with one antenna and pronotum; rest of mesosoma crushed; metasoma complete; 4–5 fragments of legs. S4 C1—one leg without coxa; S4 C2—two legs without coxae. S5 C1—one forewing and one hind wing. S5 C2—antenna broken into two parts; one leg broken into two parts, femur and second tibia and tarsomeres.

Remarks. Male genitalia and some sclerites of last segment of metasoma are mounted on slide S2.

Hosts. Unknown.

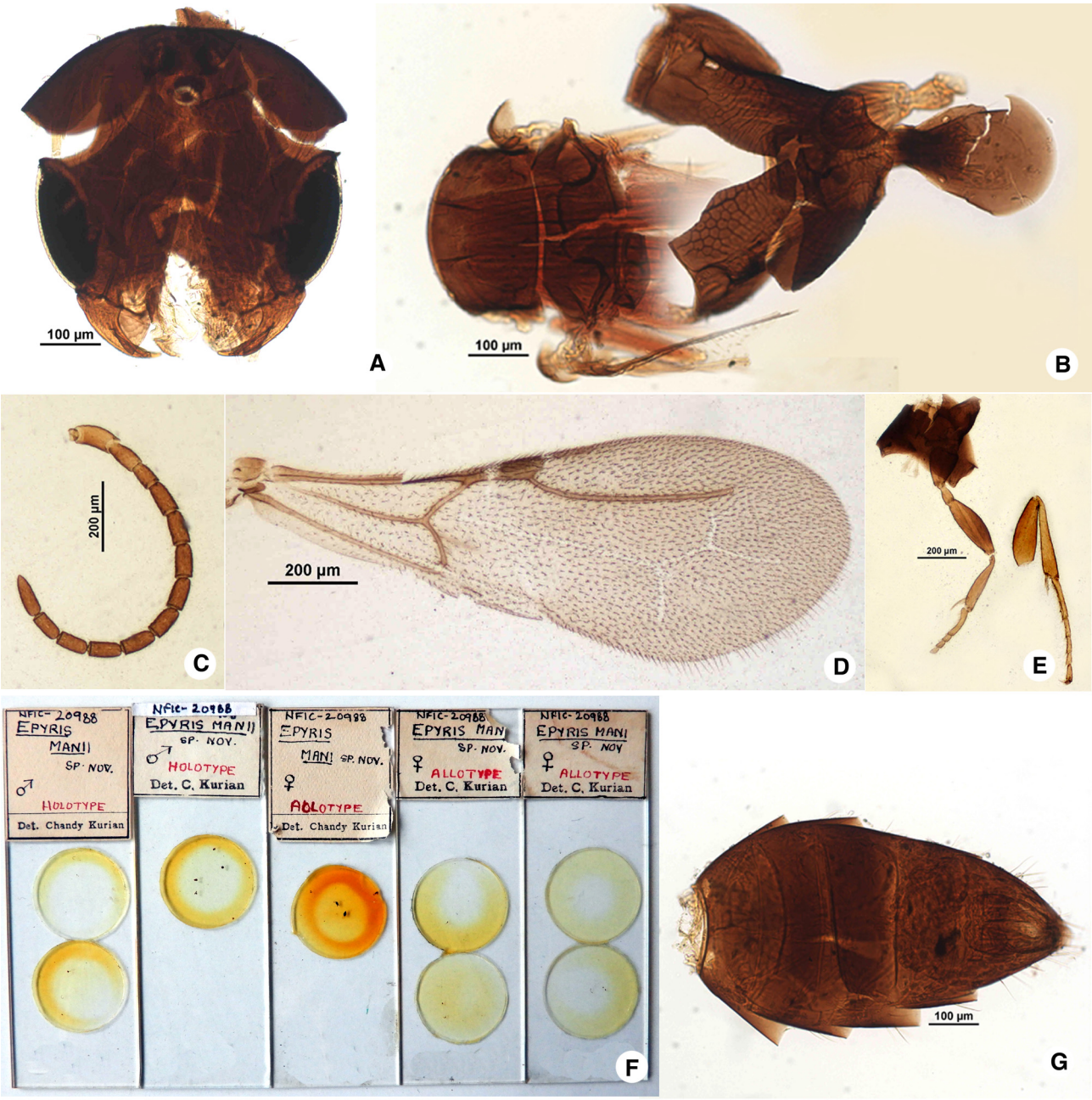

FIGURE 30. A–G. *Epyris manii* Kurian, 1955. Holotype. **A.** Head in frontal view; **B.** Parts of crushed mesosoma, in dorsal view; **C.** Antenna; **D.** Forewing; **E.** Legs, left pro- and right hindleg; **F.** Five slides, left two of holotype and rest paratype. **G.** Metasoma, dorsal view.

31. *Epyris pusae* (Kurian, 1955)

Fig. 31, A–J

Neodisepyris pusae Kurian, 1955, 4: 106, 110, 111, Figs: 159–165.
Type locality: Pusa, Bihar, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 6.4 mm. General colour black with apex of metasoma reddish-brown. Head wider than long; frons weakly coriaceus; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, longer than lateral ones; antenna with sparse pubescence, scape 2.5 × longer than pedicel, pedicel longer than first flagellomere. Pronotum strongly coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, longer than parapsidal

signum; mesoscuto-mesoscutellar suture not sulcate. Metapectal-propodeal disc as long as wide; metapostnotal median carina present. Tarsal claw bifid. Wings hyaline; forewing with pterostigma brown; hind wing with five hamuli. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA], *Bengal* {*Bihar*}, Pusa, I-1907, A.M. coll.

Type conditions. Holotype dissected on slides Nº. 73/B. *On slides*: S1 C1—one forewing, one hind wing. S1 C2—two broken antennae—one without distal four flagellar segments; second with distal six flagellar segments; one proleg and one metaleg, both without coxae. S2 C1—head with scape, pedicel and three funicle segments; metasoma. S2 C2—mesosoma, pronotum separated; three legs with detached coxae nearby.

Remarks: Kurian describes the holotype as male, but the slide (S2) contains parts of a female. There is no trace of card labels.

Hosts. Unknown.

32. *Epyris shishami* (Kurian, 1955)

Fig. 32, A–K

Neodisepyris shishami Kurian, 1955, 4: 106, 111–113, Figs: 166–170.
Type locality: Dehradun, India (♀ holotype, NFIC-FRI, examined).

Diagnosis. Female. Length about 5.2 mm. General colour black with apex of metasoma reddish-brown. Head as long as wide; frons weakly coriaceus; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, longer than lateral ones; mandible tetradentate; antenna with sparse pubescence, scape 2.5 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, as long as parapsidal signum; mesoscuto-mesoscutellar suture not sulcate, foveae oval, mid-sized. Metapectal-propodeal disc wider than long; metapostnotal median carina present; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma brown; hind wing with four hamuli. Metasoma polished.

Material examined. Holotype: [INDIA, *Uttarakhand*,] Dehra Dun {Dehradun}, 22-I-1913, Shisham Bark coll.

Type conditions. Holotype partly dissected on slide Nº. 120/B and remaining rested on the pin. *Pinned*: Mesosoma with left metaleg and some coxae and metasoma. *On slides*: S1 C1—head, cracked; two antennae; one proleg, one metaleg, both without coxae; one forewing; one hind wing. S1 C2—one proleg, one metaleg with detached coxae; one more coxa; one forewing.

Hosts. Unknown.

Genus *Formosiepyris* Terayama, 2004a

Formosiepyris Terayama, 2004a, 12: 91, 92.
Type species: *Formosiepyris marishi* Terayama, 2004a by original designation.

Here, we transfer the species *E. agraensis* (Kurian, 1955) to *Formosiepyris*. So, *Formosiepyris* now has one species described by Kurian.

33. *Formosiepyris agraensis* (Kurian, 1955) comb. nov.

Fig. 33, A–L

Rhabdepyris agraensis Kurian, 1955, 4: 98–100, Figs: 112–117.
Type locality: Agra, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 5.0 mm. General colour black with apex of metasoma reddish-brown. Head longer than wide; frons strongly coriaceus; ocelli distinct, crossing to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; mandible tridentate; antenna with dense pubescence,

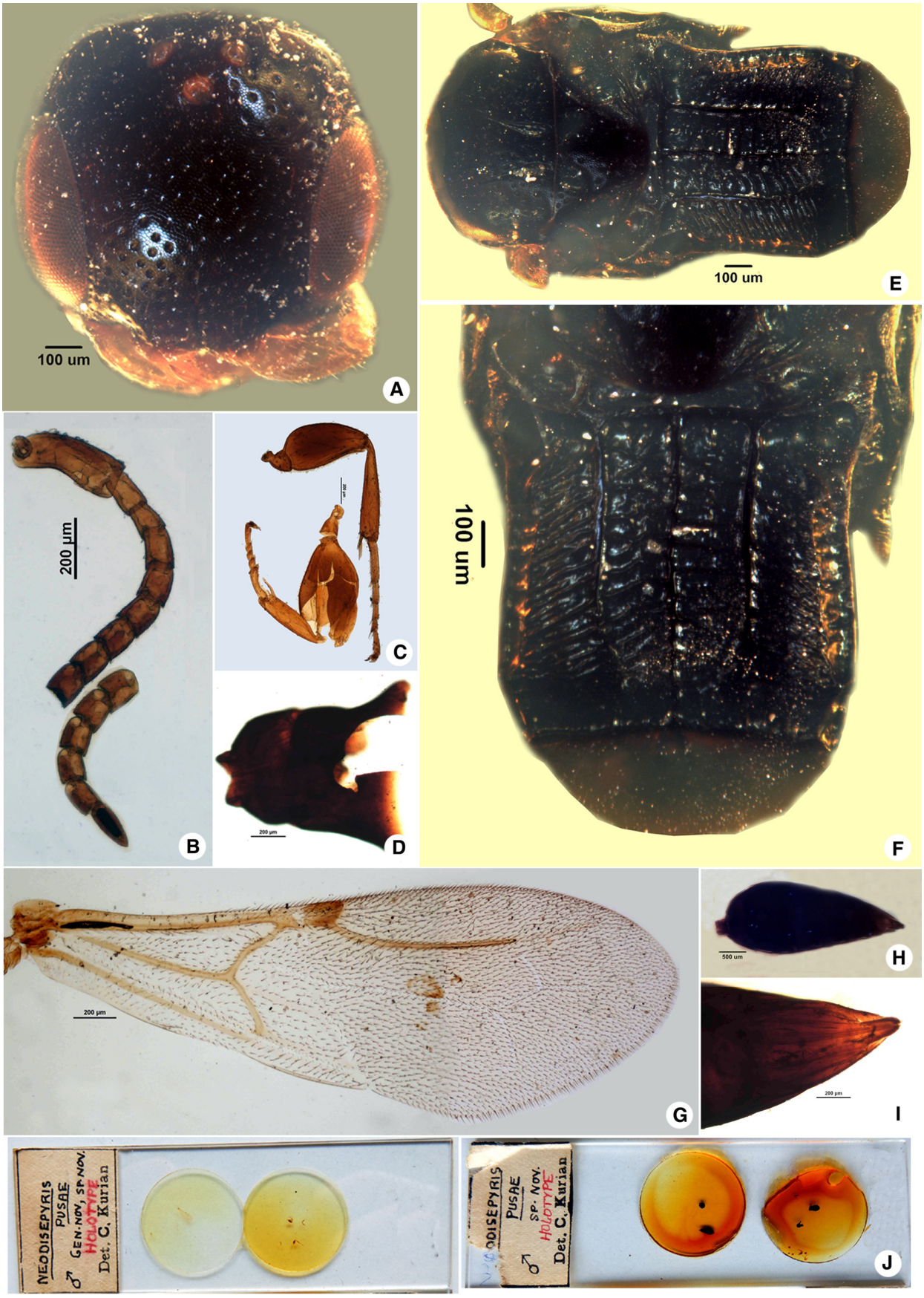

FIGURE 31. A–J. *Epyris pusae* (Kurian, 1955). Holotype. **A.** Head, frontal view; **B.** Antenna; **C.** Legs, left pro- and right metaleg; **D.** Pronotum; **E.** Mesosoma, except pronotum, dorsal view **F.** Metapectal-propodeal disc, dorsal view; **G.** Forewing; **H.** Metasoma, dorsal view; **I.** Tip of metanotum showing ovipositor; **J.** Two slides of holotype.

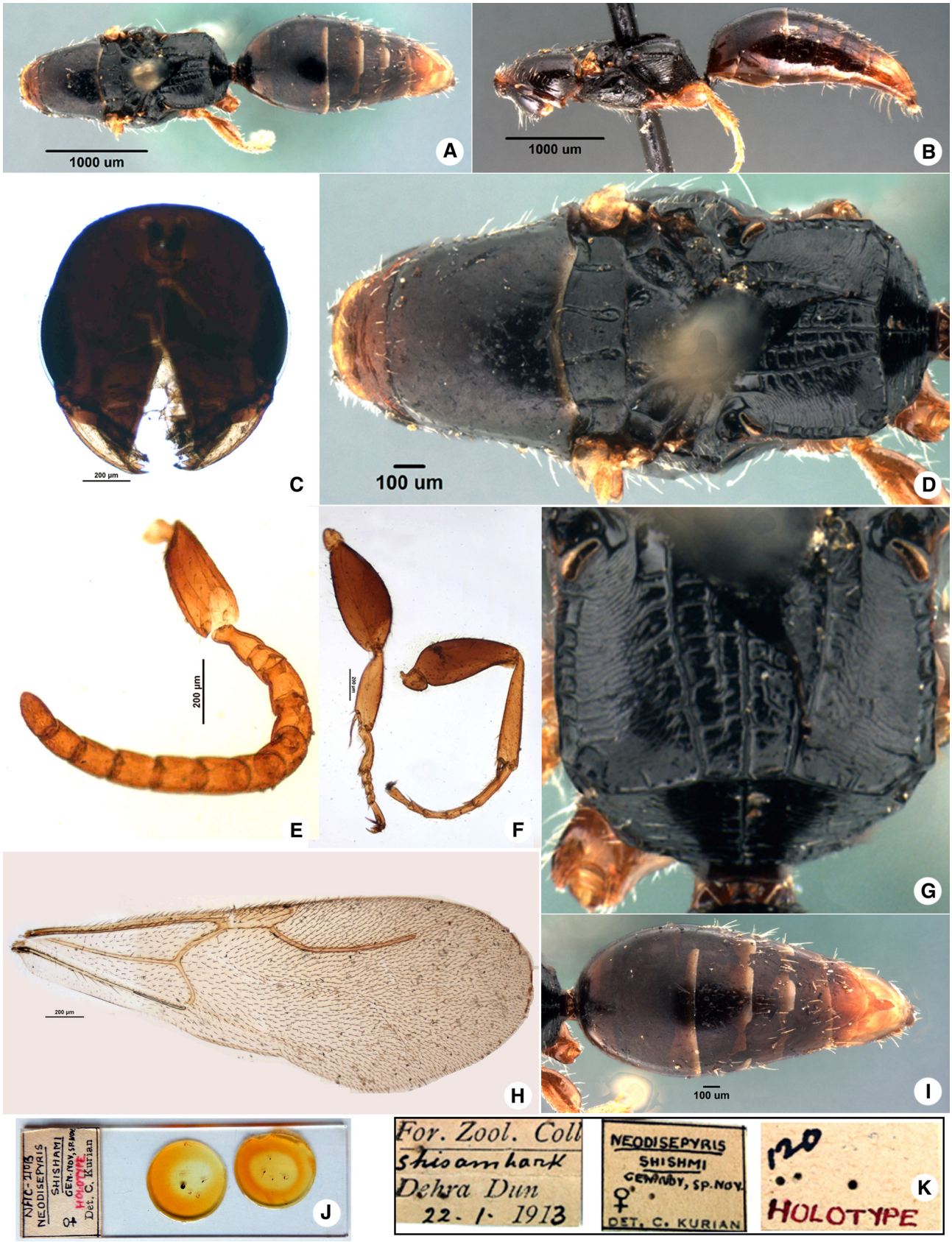

FIGURE 32. A–K. *Epyris shishami* (Kurian, 1955). Holotype. **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Head, frontal view; **D.** Mesosoma, dorsal view; **E.** Antenna; **F.** Legs, left pro- and right metaleg; **G**. Metapectal-propodeal disc, dorsal view; **H.** Forewing; **I.** Metasoma dorsal view; **J.** Slide of holotype; **K.** Labels.

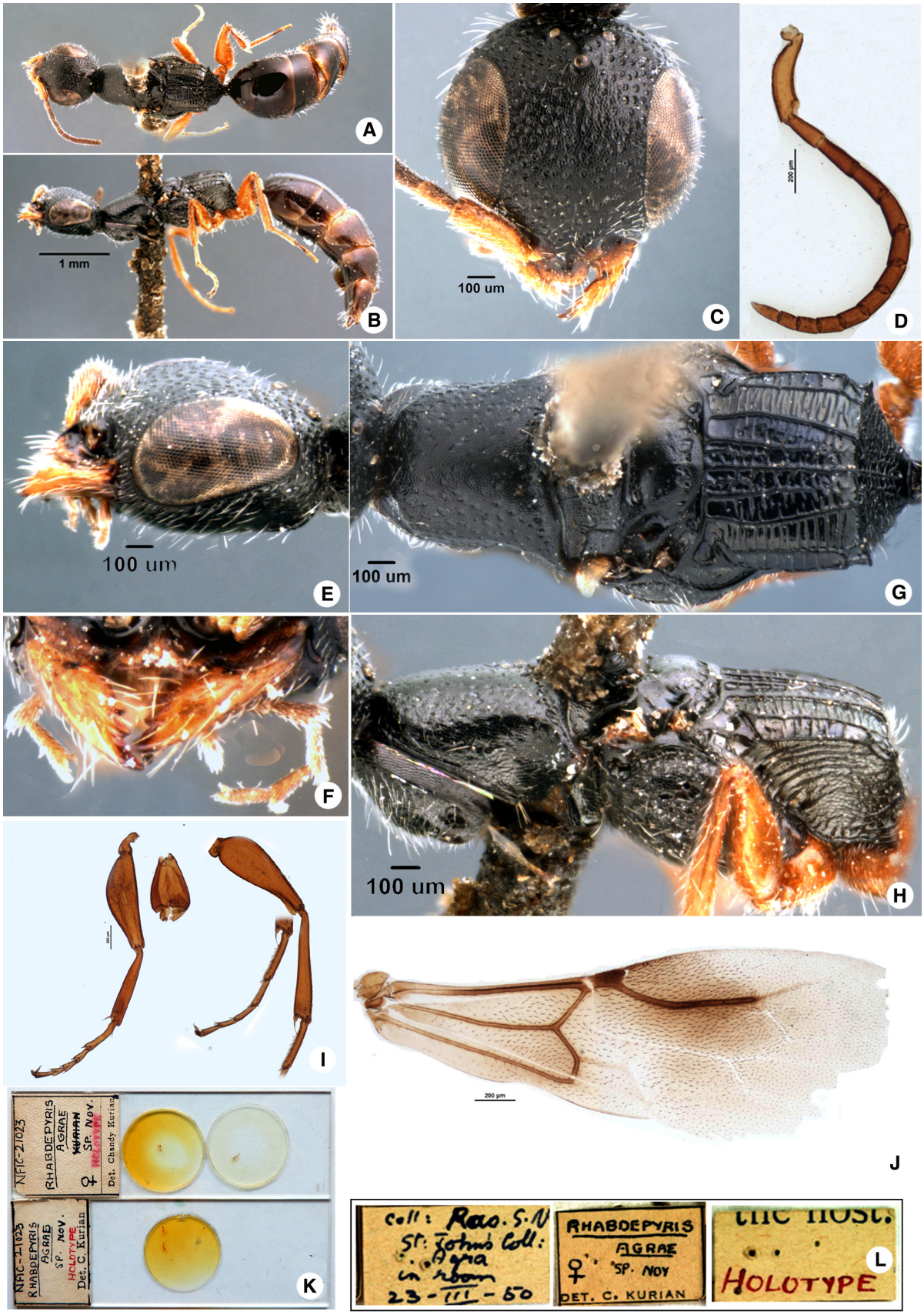

FIGURE 33. A–L. *Formosiepyris agraensis* (Kurian, 1955) **comb. nov.** Holotype. **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Head, frontal view; **D.** Antenna; **E.** Head, lateral view; **F.** Mouth margin of head showing mandibular dentition; **G.** Mesosoma, dorsal view; **H.** Mesosoma, lateral view; **I.** Legs, left pro- and right metaleg; **J.** Forewing; **K.** Two slides of holotype; **L.** Labels.

scape 2.0 × longer than pedicel, pedicel longer than first flagellomere. Pronotum strongly coriaceous; mesonotum shorter than pronotal dorsal area; notauli indistinct, as long as parapsidal signum; mesoscuto-mesoscutellar suture sulcate, trabeculate, deep. Metapectal-propodeal disc as long as wide; metapostnotal median carina present; first abdominal spiracle dorsally placed. Tarsal claw bifid. Wings nearly hyaline; forewing with pterostigma brown; hind wing with four hamuli. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Uttar Pradesh*,] Agra, St John's College, 23-III-l950, S.N. Rao coll.

Type conditions. Holotype partly dissected on slide Nº. 22/B and remaining rested on the pin. *Pinned*: Body intact, with left antenna, mesolegs and right metaleg. *On slides*: S1 C1—one proleg with detached coxa; one antenna. S1 C2—one forewing and one hind wing. S2 C1—one proleg; one metaleg without coxa.

Remarks. This species was originally allocated in *Rhabdepyris*. Azevedo *et al*. (2018, p. 156) synonymized *Rhabdepyris* with *Epyris* and transferred *R. agraensis* to *Epyris*. We observed the eyes remarkably large with setae, the dorsal pronotal area foveolate posteriorly, the mesoscuto-scutellar suture sulcate and trabeculate, and the notauli and parapsidal signum present and weak. These observations support moving this species to *Formosiepyris*.

Hosts. Unknown.

Genus *Holepyris* Kieffer, 1904b

Holepyris Kieffer, 1904b, 1: 309.
Type species: *Holepyris africanus* Kieffer, 1904b by subsequent designation.

Here, we are transferring the species *Epyris patnae* Kurian, 1955 and *Sclerodermus raonis* (Kurian, 1955) to *Holepyris*. So, *Holepyris* now has two species described by Kurian.

34. *Holepyris patnae* (Kurian, 1955) comb. nov.

Figs 34, A–L; 51, K–L.

Epyris patnae Kurian, 1955, 4: 89, 97, 98, Figs: 107–111.
Type locality: Patna, India (♂ holotype, NFIC-FRI).

Diagnosis. Male. Length about 2.8 mm. General colour dark reddish-brown to black. Head as long as wide; frons strongly coriaceus; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, as long as lateral ones; mandible tridentate; antenna with sparse pubescence, scape 0.2 × longer than pedicel, pedicel shorter than first flagellomere. Pronotum strongly coriaceous; mesonotum shorter than pronotal dorsal area; notauli indistinct, shorter than parapsidal signum; mesoscuto-mesoscutellar suture sulcate, trabeculate, deep. Metapectal-propodeal disc longer than wide; metapostnotal median carina present; first abdominal spiracle laterally placed. Tarsal claw bifid. Wings hyaline; forewing with pterostigma light brown; hind wing with four hamuli. Metasoma polished. Genitalia: Harpe simple, longer than gonostipes in dorsal view, apex rounded, not arched inward; gonostipes wide, not covering aedeagal base; cuspis elongate, apex anterior to apex of harpe; digitus with apex posterior to apex of cuspis, its posterior margin smooth with three teeth; aedeagus subtrapezoidal, its apex posterior to apex of digitus. Female. Unknown.

Material examined. Holotype: [INDIA,] *Patna*, 26-V-1911, parasitic, C. Nº. 881. Paratype: 1♂, same data of the holotype.

Type conditions. Holotype partly dissected on slide Nº. 90/B and rest was mounted on the pin. *Pinned*: Head and Metasoma both separately glued to the pith to which mesosoma is pinned; mesosoma, with both pro- and mesolegs attached. *On slides*: S1 C1—one forewing and one hind wing. S1 C2—one proleg, one leg without coxa; one antenna complete. Paratype partly dissected on slide Nº. 68/B and remaining rested on the pin. *Pinned*: mesosoma without any appendages. *On slides*: S2 C1—one hind wing only. S3 C1—one forewing and one hind wing. S3 C2—two legs, one with coxa; one antenna broken into two.

Remarks: The pinned holotype was in poor shape, with a rusted pin that had damaged the mesosoma, with the remaining parts (head, legs, wings and metasoma) loosely attached and disintegrating. To preserve the type, it was remounted on a card. The metasoma of the holotype was dissected to extract the genitalia, which are mounted under the rectangular cover on S1. The head and metasoma of the paratype are missing.

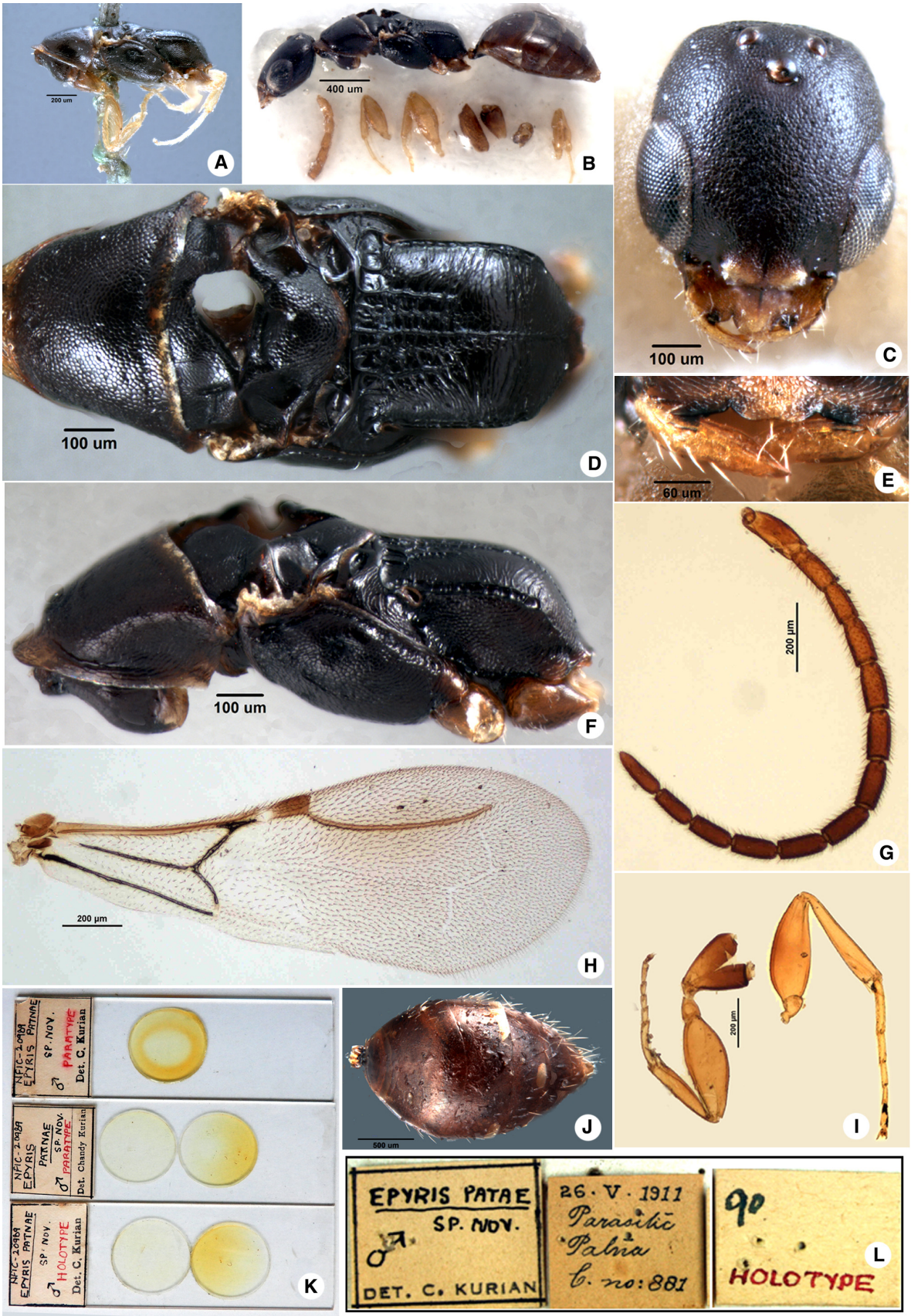

FIGURE 34. A–L. *Holepyris patnae* (Kurian, 1955) **comb. nov.** Holotype. **A.** Mesosoma, lateral view; **B.** Habitus after remounting, lateral view; **C.** Head, frontal view; **D.** Mesosoma, dorsal view; E, Lower margin of head showing dentition of mandibles; **F.** Mesosoma, lateral view; **G.** Antenna; **H.** Forewing; **I.** Legs, left pro- and right metaleg; **J.** Metasoma, dorsal view; **K.** Three slides, upper two of paratypes and lower of holotype; **L.** Labels.

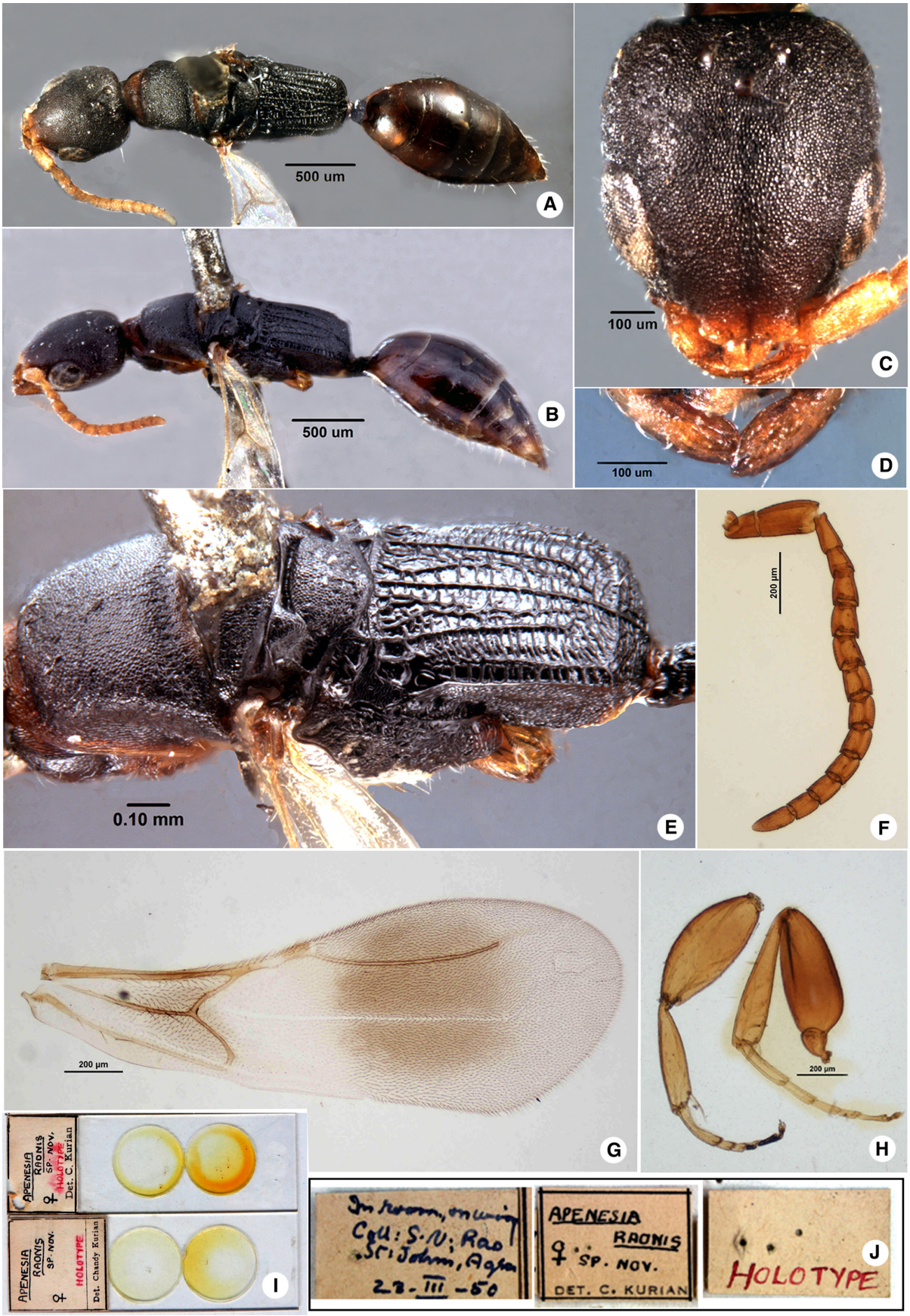

FIGURE 35. A–J. *Holepyris raonis* (Kurian, 1955) **comb. nov.** Holotype. **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Head, frontal view; **D.** Mandibles; **E.** Mesosoma, dorso-lateral view; **F.** Antenna; **G.** Forewing; **H.** Legs, left pro- and right metaleg; **I.** Two slides of holotype; **J.** Labels.

We detected the clypeus trilobate, eyes mid-sized and glabrous, the dorsal pronotal area with posterior pronotal sulcus foveolate, and with humeral angle not projected, the mesoscuto-scutellar suture sulcate, the metanotum undeveloped medially, the wings are fully developed, the forewings with three closed cells (C_2c, R_2c, $1Cu_2c$), and the metapostnotal median carina is long. All of these observations support the placement of this species in *Holepyris*.

Hosts. Unknown.

35. *Holepyris raonis* (Kurian, 1955) comb. nov.

Fig. 35, A–J

Apenesia raonis Kurian, 1955, 4: 100, 101, Figs: 118–123.
Sclerodermus raonis (Kurian, 1955), Azevedo *et al.* (2018): 250.
Type locality: St. John's College, Agra, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 4.3 mm. General colour dark reddish-brown to black. Head as long as wide; frons coriaceus; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, as long as lateral ones; antenna with sparse pubescence, scape 2.4 × longer than pedicel, pedicel longer than first flagellomere. Pronotum coriaceous, posterior pronotal sulcus foveolate; mesonotum shorter than pronotal dorsal area; notauli absent; mesoscuto-mesoscutellar suture sulcate, trabeculate, deep. Metapectal-propodeal disc longer than wide; metapostnotal median carina present; first abdominal spiracle laterally placed. Tarsal claw bifid. Wings nearly hyaline; forewing with pterostigma light brown; hind wing with three hamuli. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Uttar Pradesh*,] Agra, St John's College, 23-III-1950, S.N. Rao coll.

Type conditions. Holotype partly dissected on slide Nº. 23/B and remaining rested on the pin. *Pinned*: body complete with left antenna and left forewing attached. *On slides*: S1 C1—one forewing and one hind wing. S1 C2—one antenna. S2 C1—one pro and one metaleg, both without coxae. S2 C2—two meso and one metaleg all with separated coxae.

Remarks. This species was originally allocated in *Apenesia* Westwood, 1874. Azevedo *et al*. (2018, p. 250) transferred this species to *Sclerodermus*. Kurian (1955) provided a detailed description of the holotype, with drawings. He illustrated the forewings with anterior margin angular, which is common for sclerodermines, and probably for this reason, Azevedo *et al*. (2018) removed this species from Pristocerinae, since all the females of Pristocerinae are apterous. We detected the clypeus trilobate, eyes mid-sized and glabrous, the dorsal pronotal with posterior pronotal sulcus foveolate, and with humeral angle not projected, the mesoscuto-scutellar suture sulcate, the metanotum undeveloped medially, the wings are fully developed, the forewings with three closed cells (C_2c, R_2c, $1Cu_2c$), and the metapostnotal median carina is long. These observations support the placement of this species in *Holepyris*.

Hosts. Unknown.

Genus *Laelius* Ashmead, 1893

Laelius Ashmead, 1893, 45: 50.
Type species: *Laelius trogodermatis* Ashmead, 1893 by original designation.

36. *Laelius agraensis* Kurian, 1955

Fig. 36, A–G

Laelius agraensis Kurian, 1955, 4: 81, 82, Figs: 59–64.
Type locality: Agra, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 3.0 mm. General colour black. Head wider than long; frons coriaceus; ocelli distinct; eye glabrous; median clypeal lobe conspicuous; antenna with sparse pubescence, scape 2.5 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli absent; mesoscuto-mesoscutellar suture sulcate, smooth, deep. Metapectal-propodeal disc longer than

wide; metapostnotal median carina present. Tarsal claw simple. Wings nearly hyaline; forewing with pterostigma dark brown, 2r-rs&Rs_2v short; hind wing with three hamuli. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Uttar Pradesh*,] Agra, St John's College, 13-IX-1949, Chandy Kurian coll.

Type conditions. Holotype completely dissected on slide Nº. 10/B. *On slides*: S1 C1—two forewings and one hind wing. S1 C2—prosternum and two prolegs. S2 C1—one metaleg with coxae; one antenna complete. S2 C2—two mesolegs with coxae, one metaleg without coxae. S3 C1—head with antenna (with scape, pedicel and four flagellomeres); mesosoma with right coxa; metasoma.

Hosts. Unknown.

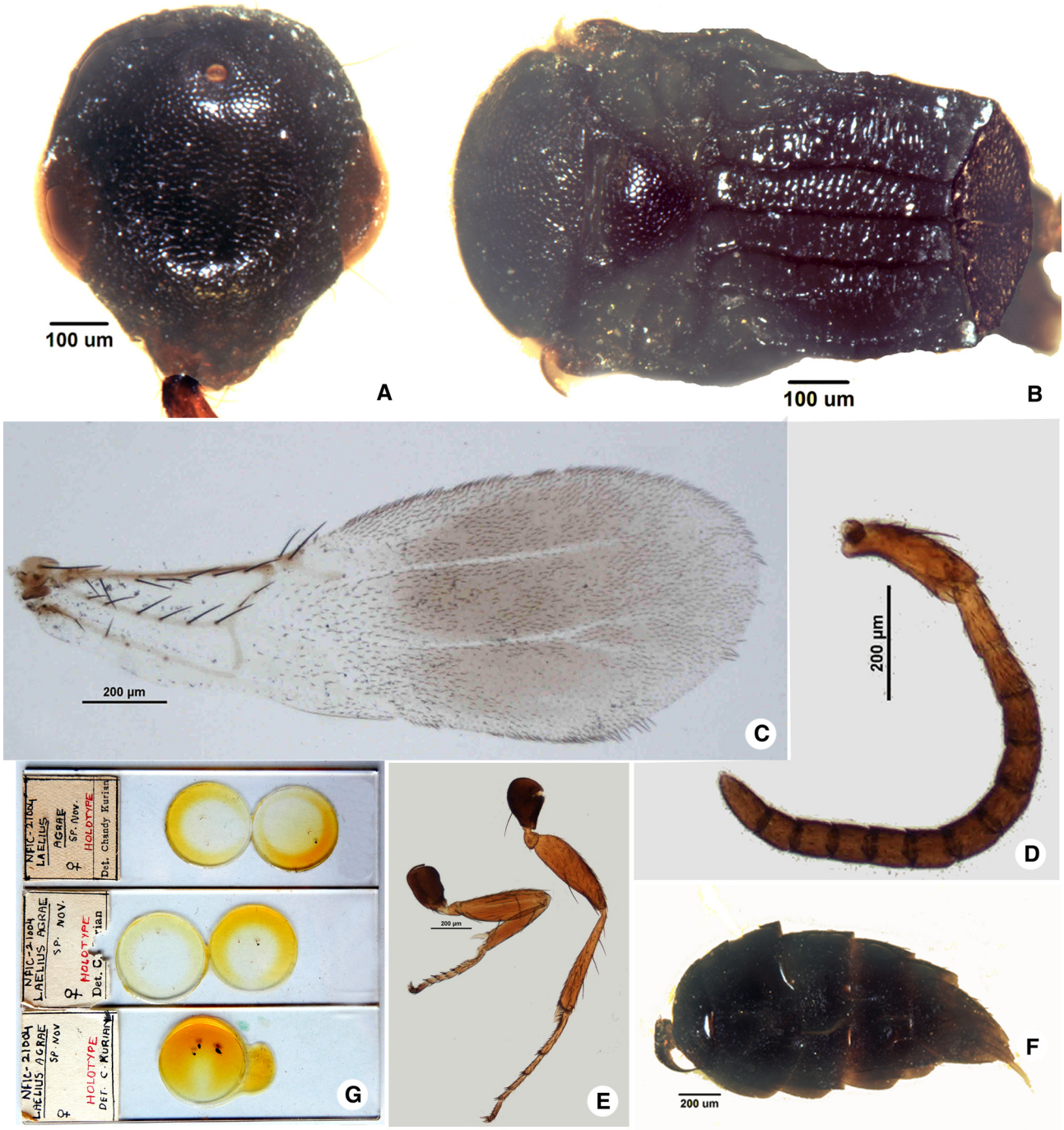

FIGURE 36. A–G. *Laelius agraensis* Kurian, 1952. Holotype. **A.** Head, frontal view; **B.** Mesosoma, dorsal view; **C.** Forewing; **D.** Antenna; **E.** Legs, left pro- and right metaleg; **F.** Metasoma, dorsal view; **G.** Three slides of holotype.

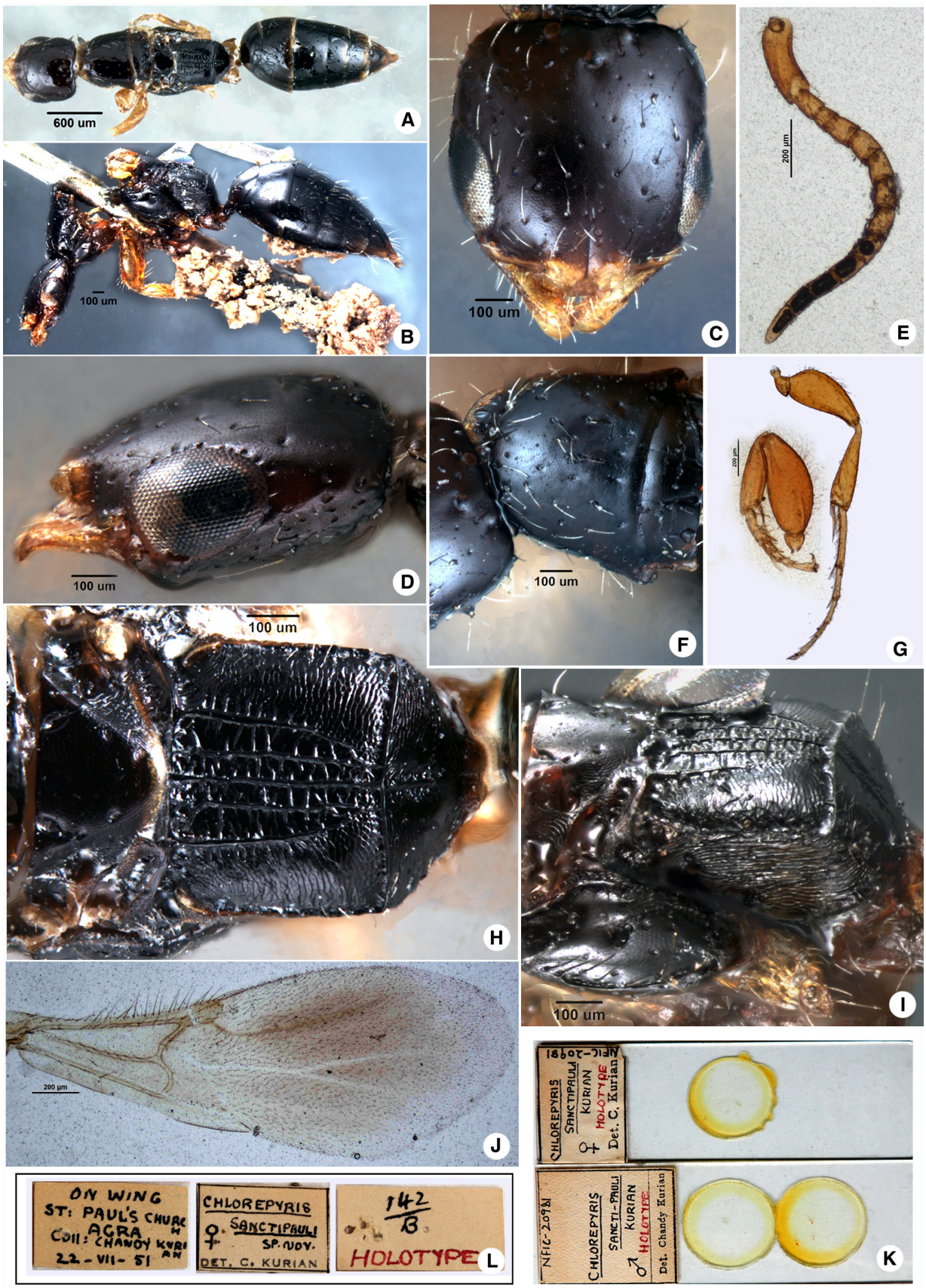

FIGURE 37. A–L. *Trachepyris sanctipauli* (Kurian, 1955) **comb. nov.** Holotype. **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Head, frontal view; **D.** Head, lateral view; **E.** Antenna; **F.** Pronotum, dorsal view; **G.** Legs, left pro- and right metaleg; **H.** Metapectal-propodeal disc, dorsal view; **I.** Metapectal-propodeal disc, lateral view; **J.** Forewing; **K.** Two slides of holotype; **L.** Labels.

Genus *Trachepyris* Kieffer, 1905

Trachepyris Kieffer, 1905, 29: 107.
Type species: *Trachepyris spinosipes* Kieffer, 1905 by original monotypy.

Here, we transfer the species *Chlorepyris sanctipauli* to *Trachepyris*. So, *Trachepyris* now has one species described by Kurian.

37. *Trachepyris sanctipauli* (Kurian, 1954b) comb. nov.
Fig. 37, A–L

Chlorepyris sanctipauli Kurian, 1954b, 3: 423–426, Figs: 14–18.
Type locality: Agra, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 4.5 mm. General colour black. Head as long as wide; frons polished; ocelli distinct, posterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin almost straight, longer than lateral ones; mandible unidentate, apex downward, ventral laminar expansion present; antenna with spine-shaped pubescence, scape 2.3 × longer than pedicel, pedicel longer than first flagellomere. Pronotum polished; mesonotum shorter than pronotal dorsal area; notauli complete, longer than parapsidal signum; mesoscuto-mesoscutellar suture not sulcate, foveae oval, very small. Metapectal-propodeal disc as long as wide; metapostnotal median carina present; first abdominal spiracle laterally placed. Protibia and metatibia with long spines; tarsal claw bifid. Wings nearly hyaline; forewing with pterostigma brown, 2r-rs&Rs_2v short; hind wing with five hamuli. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Uttar Pradesh*,] Agra, St. Paul's Church, 22-VII-1951, Chandy Kurian coll.

Type conditions. Holotype partly dissected on slide Nº. 142/B and remaining rested on the pin. *Pinned:* Complete body. *On slides*: S1 C1—one metaleg without coxa and femur. S2 C1—one forewing; one hind wing. S2 C2—one proleg; one metaleg; both legs without coxae; one antenna.

Remarks. Kurian (1954b, p. 423–426) provided a detailed description of the holotype with drawings. We observed the mandibles with apex downward, ventral margins with laminar expansion, and the mesoscuto-scutellar suture with two foveae, not sulcate, which support the placement of this species in *Trachepyris*. One of the holotype slides is mistakenly marked as 'male'.

Hosts. Unknown.

Subfamily Mesitiinae Kieffer, 1914

Type genus: *Mesitius* Spinola, 1853

Genus *Sulcomesitius* Móczár, 1970

Sulcomesitius Móczar, 1970, 16: 177, 199.
Type species: *Sulcomesitius longispinus* Móczár, 1970 by original designation.

Kurian did not describe any species of *Sulcomesitius* but later, Móczár (1970) transferred two species (*Mesitius bahaduri* and *M. duni*) described by Kurian (1955) to *Sulcomesitius*. So, *Sulcomesitius* has two species described by Kurian.

38. *Sulcomesitius bahaduri* (Kurian, 1955)

Fig. 38, A–H

Mesitius bahaduri Kurian, 1955, 4: 83–85, Figs: 67–69.
Type locality: Pusa, Bihar, Bahadurpur, India (♀ holotype, NFIC-FRI).

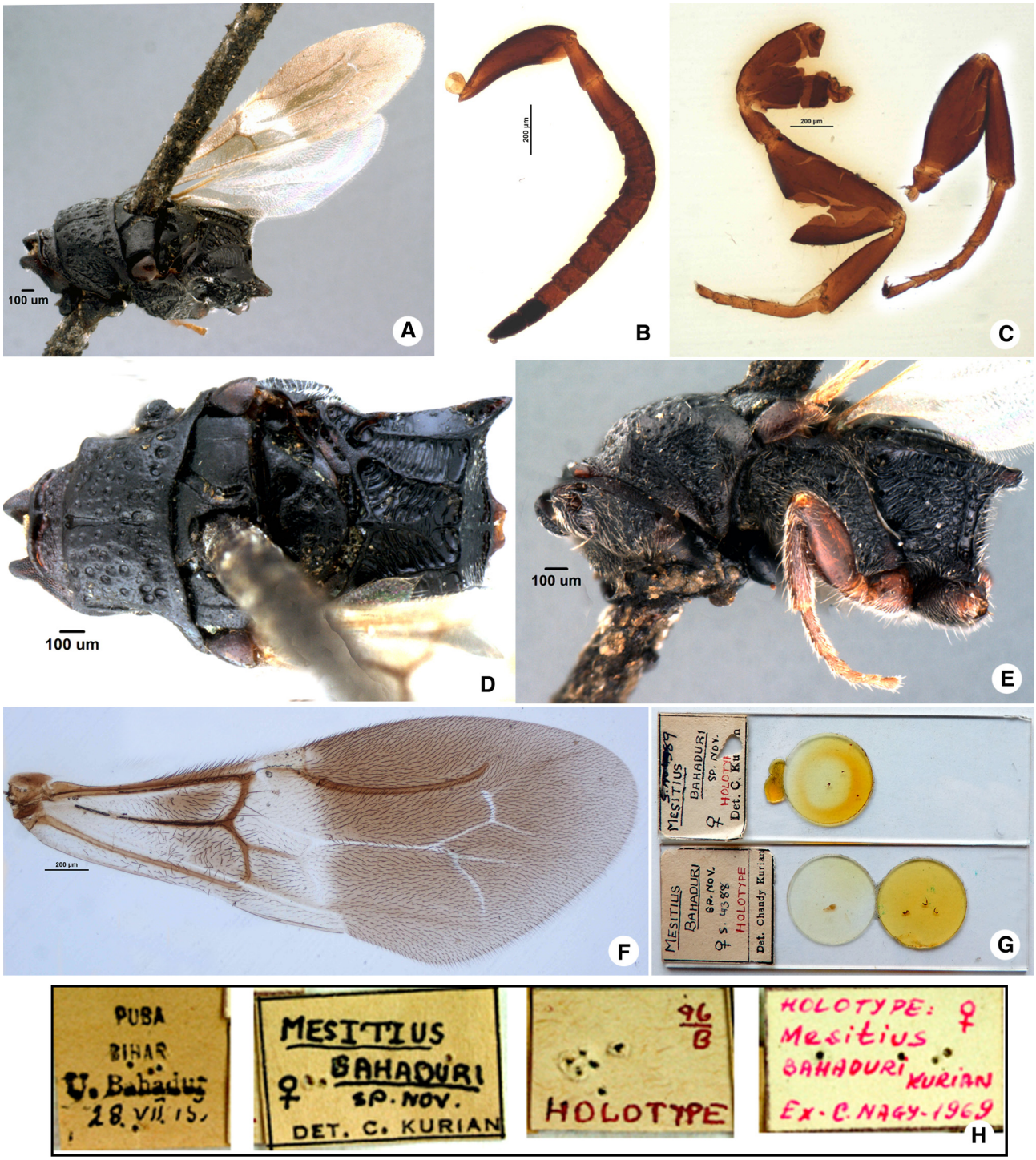

FIGURE 38. A–H. *Sulcomesitius bahaduri* Kurian, 1955. Holotype. **A.** Mesosoma, dorso-lateral view; **B.** Antenna; **C.** Legs, left pro- and right metaleg; **D.** Mesosoma, dorsal view; **E.** Mesosoma, lateral view; **F.** Forewing; **G.** Two slides of holotype; **H.** Labels.

Diagnosis. Female. Length about 5.2 mm. General colour black with apex of metasoma reddish-brown. Head as long as wide; frons coriaceus; ocelli distinct; eye weakly setose; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; antenna with dense pubescence, scape 2.3 × longer than pedicel, pedicel

shorter than first flagellomere. Pronotum coriaceous, median pronotal line sulcate, posterior pronotal line foveolate; mesonotum shorter than pronotal dorsal area; notauli complete, deep, longer than parapsidal signum; mesoscuto-mesoscutellar suture sulcate, deep, posterior margin incurved medially. Metapectal-propodeal disc wider than long; metapostnotal median carina absent; first abdominal spiracle dorsally placed; posterior propodeal projection spine-shaped. Tarsal claw bifid. Wing with two hyaline spots; forewing with pterostigma slight brown; hind wing with three hamuli. Metasoma polished; second abdominal segment distinctly longer than distal ones. Male. Unknown.

Material examined. Holotype: [INDIA], *Bihar*, Pusa, Bahadur {Bahadurpur}, 28-VII-1915.

Type conditions. Holotype partly dissected on slide Nº. 96/B and remaining rested on the pin. Head and metasoma missing from the pin. *Pinned*: Mesosoma, with left wings and mesoleg and all coxae. *On slides*: S1 C1—one metaleg without coxae; three coxae. S2 C1—one forewing and one hind wing. S2 C2—one proleg; one metaleg without coxa; one antenna.

Hosts. Unknown.

39. *Sulcomesitius duni* (Kurian, 1955)

Fig. 39, A–H

Mesitius duni Kurian, 1955, 4: 83, 85, 86, Figs: 70–75.
Type locality: Dehradun, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 5.5 mm. General colour black with apex of metasoma reddish-brown. Head as long as wide; frons coriaceus; ocelli distinct; eye weakly setose; median clypeal lobe conspicuous, anterior margin almost rounded, longer than lateral ones; mandible tetradentate; antenna with sparse pubescence, scape 2.5 × longer than pedicel, pedicel shorter than first flagellomere. Pronotum strongly coriaceous; mesonotum as long as pronotal dorsal area; notauli complete, longer than parapsidal signum; mesoscuto-mesoscutellar suture sulcate. Metapectal-propodeal disc wider than long; metapostnotal median carina present; first abdominal spiracle dorsally placed; posterior propodeal projection spine-shaped. Tarsal claw bifid. Wings nearly hyaline; forewing with pterostigma brown; hind wing with three hamuli. Metasoma polished; second abdominal segment distinctly longer than distal ones. Male. Unknown.

Material examined. Holotype: [INDIA, *Uttarakhand*,] Dehra Dun {Dehradun}, Shisham bark, 22-I-1913.

Type conditions. Holotype completely dissected on slide Nº. 122/B. *On slides*: S1 C1—one complete antenna; forewing; one proleg in three fragments—femur, tibia and basal four tarsal segments; mesoleg without coxa and pretarsal segment; metaleg in three fragments—coxa, femur and tibia and tarsi. S1 C2—fragment of palpi; mandible; distal part of hind wing. S2 C1—head and with attached anterior part of mesosoma; posterior part of mesosoma; metasoma.

Remarks. The holotype is a female and not a male as labeled. Móczar (1970, p. 424) also observed this mistake.

Hosts. Unknown.

Subfamily Pristocerinae Mocsáry, 1881

Type genus: *Pristocera* Klug, 1808

Genus *Pristocera* Klug, 1808

Pristocera Klug, 1808, 2: 49.
Type species: *Bethylus depressus* Fabricius, 1804 by original monotypy.

Kurian (1952) described one species of *Pristocera* (*P. govindrami)*. Now, we transfer *Pristepyris agraensis* Kurian, 1952 to *Pristocera* (see below). So, *Pristocera* now has two species described by Kurian.

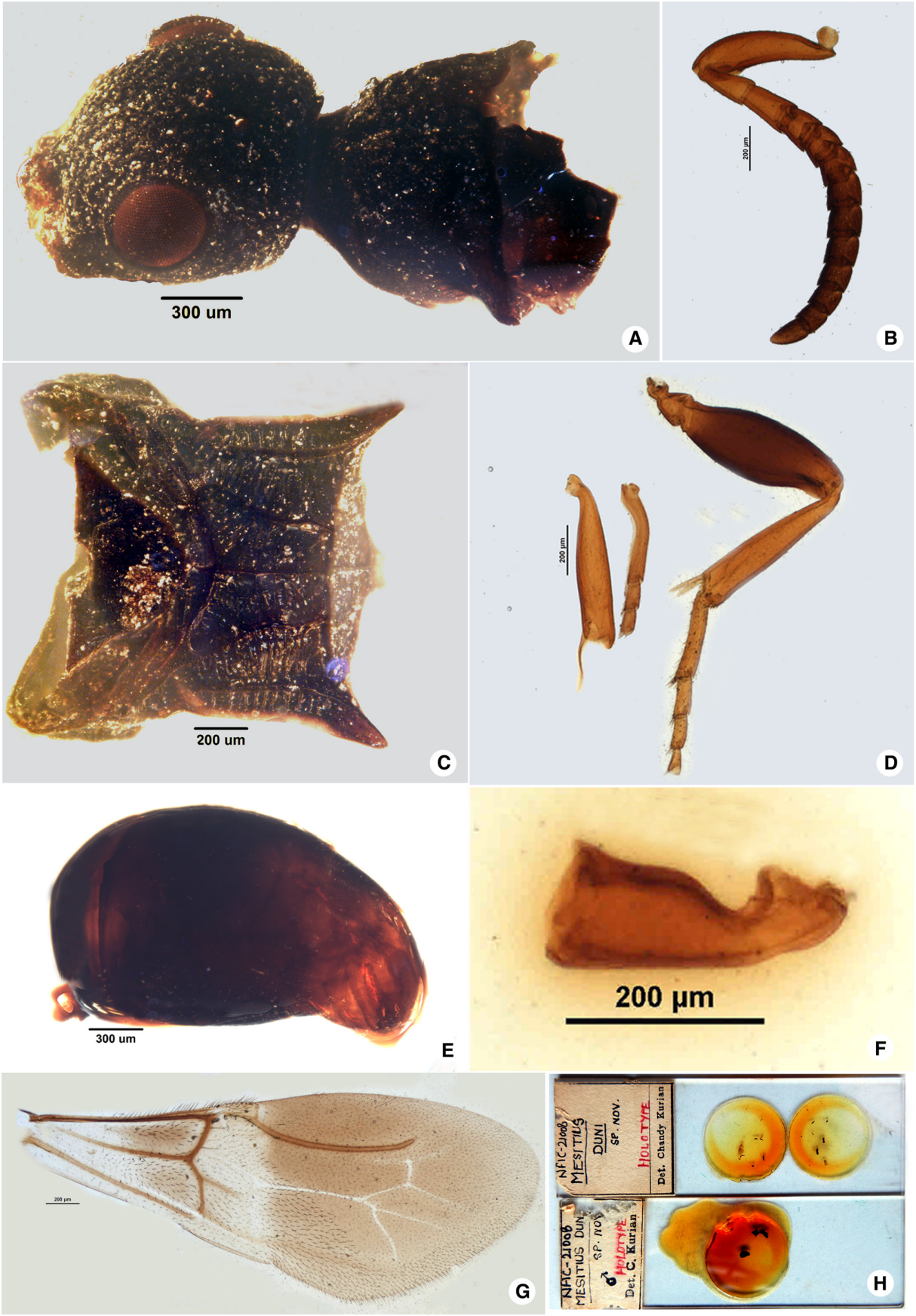

FIGURE 39. A–H. *Sulcomesitius duni* Kurian, 1955. Holotype. **A.** Head and mesosoma, dorso-lateral view; **B.** Antenna; **C.** Metapectal-propodeal disc, dorsal view; **D.** Legs, left pro- and right metaleg; **E.** Metasoma, lateral view; **F.** Mandible; **G.** Forewing; **H.** Two slides of holotype.

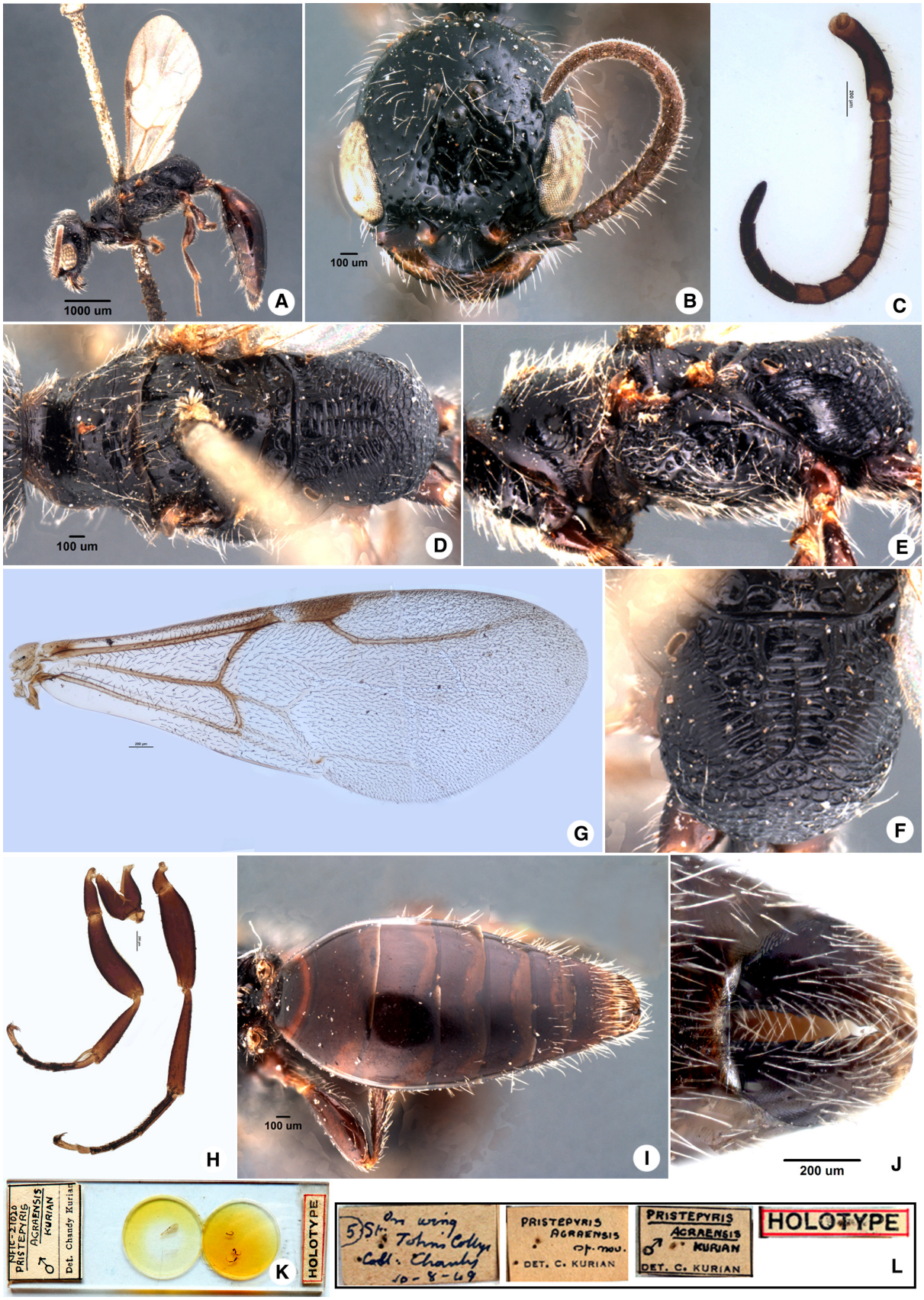

FIGURE 40. A–L. *Pristocera agraensis* (Kurian, 1955) **comb. nov.** Holotype. **A.** Habitus, lateral view; **B.** Head, frontal view; **C.** Antenna; **D.** Mesosoma, dorsal view; **E.** Mesosoma, lateral view; **F.** Metapectal-propodeal disc, dorsal view; **G.** Forewing; **H.** Legs, left pro- and right metaleg; **I.** Metasoma, dorsal view; **J.** Tip of Metasoma, ventral view, showing bifurcated hypopygium; **K.** Slide of holotype; **L.** Labels.

40. *Pristocera agraensis* (Kurian, 1952) comb. nov.
Figs 40, A–L; 51, M–N.

Pristepyris agraensis Kurian, 1952, 1: 68, 69, Figs: 13–17.
Type locality: Botanical Garden, St. John's College, Agra, India (♂ holotype, NFIC-FRI).

Diagnosis. Male. Length about 7.0 mm. General colour black. Head as long as wide; frons weakly coriaceus; ocelli distinct, anterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; mandible tetradentate; antenna with sparse pubescence, scape 4.0 × longer than pedicel, pedicel shorter than first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, longer than parapsidal signum; mesoscuto-mesoscutellar suture sulcate, smooth. Metapectal-propodeal disc as long as wide; metapostnotal median carina present; first abdominal spiracle dorsally placed. Tarsal claw trifid. Wings nearly hyaline; forewing with pterostigma dark brown; hind wing with six hamuli. Metasoma polished; ninth abdominal sternum divided into two plates. Genitalia: Harpe simple, longer than gonostipes in dorsal view, apex rounded, not arched inward, with small digitiform projection; gonostipes narrow, not covering aedeagal base; cuspis very short, apex anterior to apex of harpe; digitus with apex posterior to apex of cuspis, its posterior margin smooth; aedeagus trapezoidal, its apex posterior to apex of digitus. Female. Unknown.

Material examined. Holotype: [INDIA, *Uttar Pradesh*,] Agra, St John's College, Botanical Garden, 10-VIII-1949, Chandy Kurian coll.

Type conditions. Holotype partly dissected and mounted on slide Nº. 5/B and remaining rested on the pin. *Pinned*: body complete and intact, head with left antenna, mesosoma with right pair of wings, left pro- and metalegs, right metaleg, some coxae and metasoma. *On slides*: S1 C1—one forewing and one hind wing. S1 C2—one pro and one metaleg, both without coxa; one antenna.

Remarks. Kurian (1952, p. 68, 69) provided a detailed description of the holotype with drawings. The male genitalia, ninth abdominal sternum, two apical tergites and a last sternite were dissected from the metasoma and mounted on slide S1 under three small rectangular covers. We observed the body length (about 7 mm), the mandibles robust and large, the metanotum with metanotal trough foveolate, and the ninth abdominal segment divided into two plates. As indicated by Zamprogno & Azevedo (2014), these observations support the placement of this species in *Pristocera*.

Hosts. Unknown.

41. *Pristocera govindrami* Kurian, 1952
Fig. 41, A–G

Pristocera govindrami Kurian, 1952, 1: 70–72, Figs: 18–23.
Type locality: Suduganga, India (♂ holotype, NFIC-FRI).

Diagnosis. Male. Length about 8.5 mm. General colour dark reddish-brown to black. Head as long as wide; frons weakly coriaceus; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, anterior margin rounded, longer than lateral ones; mandible tetradentate; antenna with dense pubescence, scape 4.0 × longer than pedicel, pedicel shorter than first flagellomere. Pronotum coriaceous; mesonotum shorter than pronotal dorsal area; notauli complete, as long as parapsidal signum; mesoscuto-mesoscutellar suture sulcate, smooth, deep. Metapectal-propodeal disc longer than wide; metapostnotal median carina present; first abdominal spiracle dorsally placed. Tarsal claw trifid. Wings nearly hyaline; forewing with pterostigma dark brown; hind wing with six hamuli. Metasoma polished. Female. Unknown.

Material examined. Holotype: [INDIA, *Orissa*,] Suduganga, 23-VI-1920, a bethylid parasite on window, G. R. Dutt coll.

Type conditions. Holotype partly dissected and mounted on slide Nº. 7/B and remaiing part rested on the pin. *Pinned*: Mesosoma, with left hind wing; left proleg and both metalegs. *On slides*: S1 C1—one proleg without coxa; coxa and part of femur. S1 C2—one forewing and one hind wing. S2 C1—two metalegs one without coxa and second with tibia and tarsi separated. S2 C2—one forewing and one hind wing.

Remarks. The head and metasoma of the holotype are missing.

Hosts. Unknown.

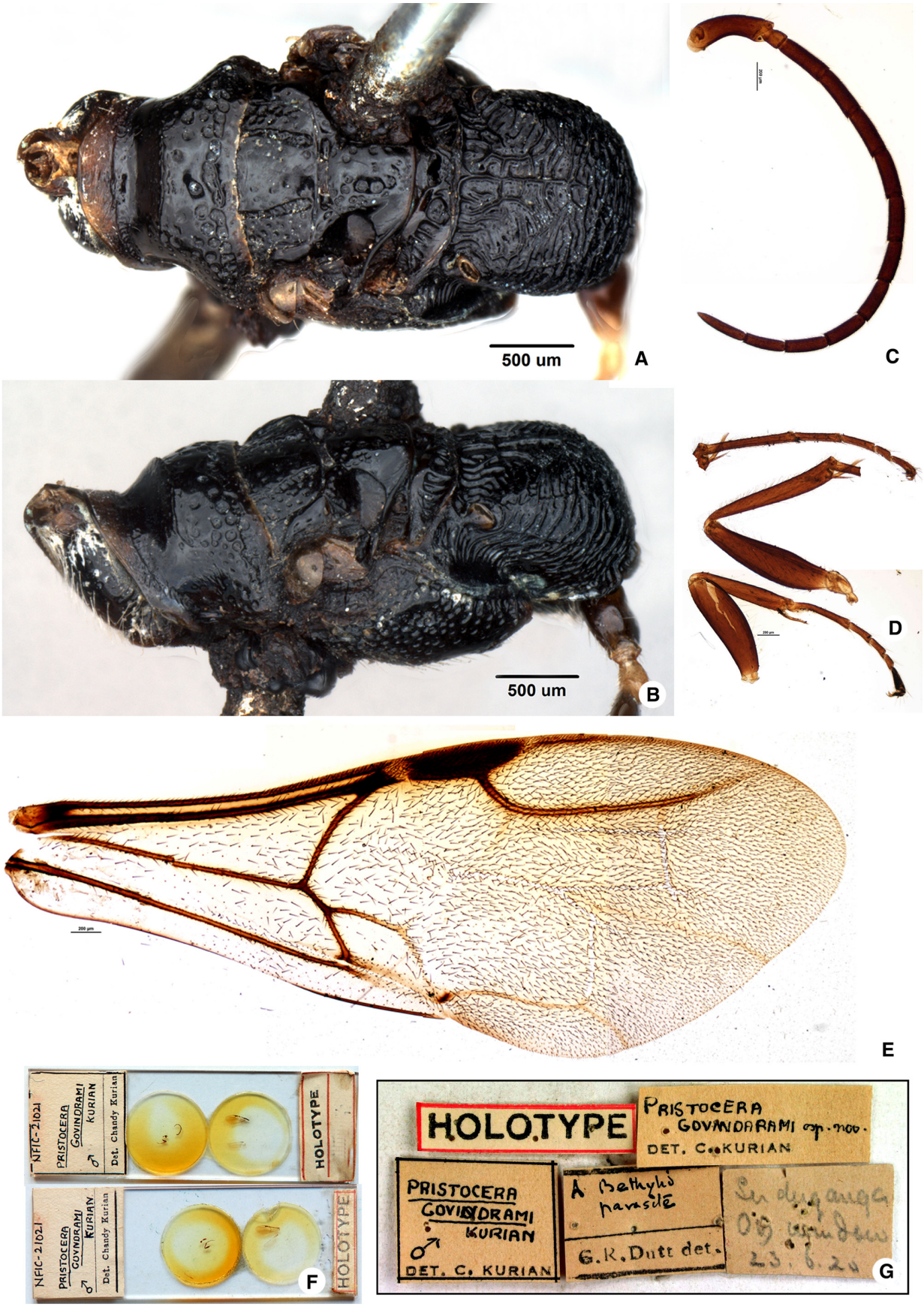

FIGURE 41. A–G. *Pristocera govindrami* Kurian, 1952. Holotype. **A.** Mesosoma, dorsal view; **B.** Mesosoma, lateral view; **C.** Antenna; **D.** Parts of legs; **E.** Forewing; **F.** Two slides of holotype; **G.** Labels.

Subfamily Scleroderminae Kieffer, 1914

Type genus: *Sclerodermus* Latreille, 1810

Genus *Cephalonomia* Westwood, 1833

Cephalonomia Westwood, 1833, 6: 420.
Type species: *Cephalonomia formiciformis* Westwood, 1833 by original monotypy.

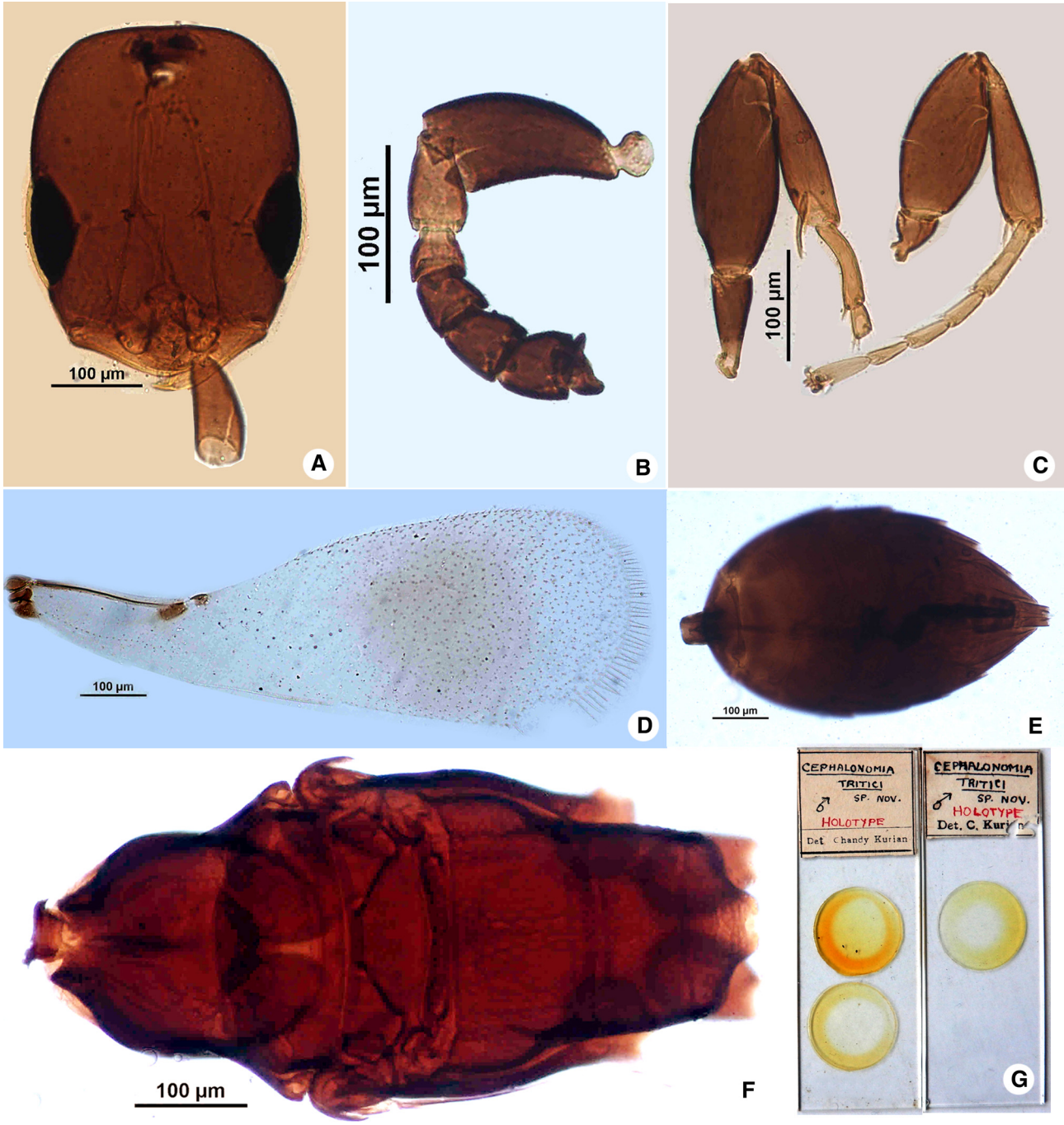

FIGURE 42. A–G. *Cephalonomia tritici* Kurian, 1955. Holotype. **A.** Head, frontal view; **B.** Parts of antenna; **C.** Legs, left pro- and right metaleg; **D.** Forewing; **E.** Metasoma, dorsal view; **F.** Mesosoma, dorsal view; **G.** Two slides of holotype.

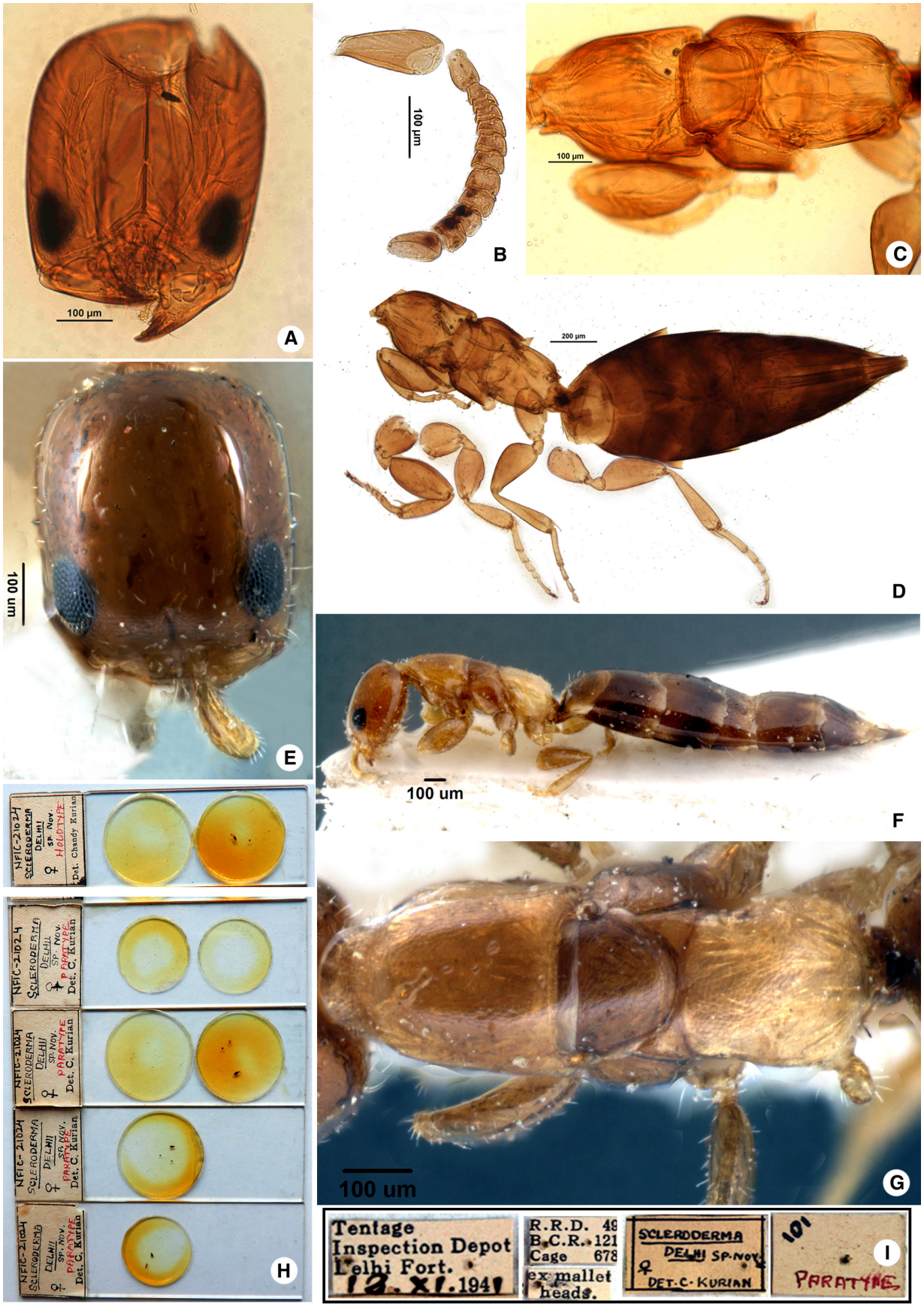

FIGURE 43. A–I. *Sclerodermus delhiensis* Kurian, 1955. **A–D**. Holotype. **A.** Head, frontal view; **B.** Antenna; **C.** Mesosoma, dorsal view; **D.** Habitus, lateral view; **E–G**, paratype; **E.** Head, frontal view; **F.** Habitus, lateral view; **G.** Mesosoma, dorsal view. **H.** Five slides, upper one of holotypes and rest paratypes; **I.** Labels of paratype.

42. *Cephalonomia tritici* Kurian, 1955
Fig. 42, A–G

Cephalonomia tritici Kurian, 1955, 4: 76, 77, Figs: 4547.
Type locality: Pusa, Bihar, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 1.3 mm. General colour dark-reddish-brown to black. Head as long as wide; frons weakly coriaceus; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, longer than lateral ones; antenna with 12 segments, scape 2.0 × longer than pedicel, pedicel longer than first flagellomere. Pronotum weakly coriaceous; mesonotum shorter than pronotal dorsal area; notauli absent; mesoscuto-mesoscutellar suture sulcate. Metapectal-propodeal disc as long as wide; metapostnotal median carina indistinct. Wings nearly hyaline; forewing with pterostigma light brown. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA], *Bihar*, Pusa, from wheat, 23-XI-1935, L. Nigam coll.

Type conditions. Holotype completely dissected and mounted on two slides. *On slides*: S1 C1—Head with scape, mesosoma with coxae attached and metasoma. S1 C2—Six legs (one without tarsi and one with few segments missing), one antenna without scape, pedicel with five flagellomeres, apical flagellomeres missing, second antenna with radicle, scape, pedicel, four flagellomeres, a partial fifth flagellomere. S2 C1—one forewing.

Remarks. The holotype is a female, not a male as described by Kurian. The slides of the holotype are also mistakenly labeled as male.

Hosts. Unknown.

Genus *Sclerodermus* Latreille, 1810

Sclerodermus Latreille, 1810, 4: 118, 119.
Type species: *Sclerodermus domesticus* Latreille, 1809 by original monotypy.

43. *Sclerodermus delhiensis* Kurian, 1955
Fig. 43, A–I

Scleroderma delhiensis Kurian, 1955: 78, 79.
Type locality: Dehradun, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length 2.0 mm—2.75 mm. General colour light brown. Head longer than wide; frons polished; ocelli absent; median clypeal lobe conspicuous, anterior margin straight, longer than lateral ones; mandible tridentate; antenna with 13 segments, sparse pubescence, scape 2.3 × longer than pedicel, pedicel longer than first flagellomere. Pronotum polished; mesonotum shorter than pronotal dorsal area; notauli absent; mesoscuto-mesoscutellar suture absent. Metapectal-propodeal disc longer than wide; metapostnotal median carina absent; first abdominal spiracle laterally placed. Micropterous. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Uttarakhand*,] Dehra Dun {Dehradun}, Tentage, Inspection Depot, Delhi Fort, ex: Millet seeds, R.R.D. 49, BCR 121, Cage 678 parasitic on Bostrichidae, 15-XI-1941. Paratypes: 1♀, same data of holotype, 3♀ same data of holotype, except 12-X-1941, 13-XI-1941 and 29-XII-1941.

Type conditions. Holotype completely dissected on slide Nº. 103/B. *On slides*: S1 C1—one proleg; two mesolegs; one metaleg; one antenna with scape nearby. S1 C2—head; mesosoma and metasoma, former with left proleg, metaleg. Paratypes, partially dissected on slides 101/B, 103/B, 109/B and 110/B and remaining rested on the pin. *Pinned*: 2♀ with bodies intact. *On slides*: S2 C1—some apical flagellomeres. S2 C2—antenna without apical flagellomeres. S3 C1—five legs; two antennae. S3 C2—head; mesosoma with right proleg and right meso and hind coxa; metasoma. S4 C1—head, mesosoma and metasoma; four legs. S5 C1—head, with scape and some flagellomeres attached, mesosoma with two legs and metasoma, some parts of legs.

Hosts. Coleoptera: Bostrichidae.

44. *Sclerodermus hardwickiae* Kurian, 1955

Fig. 44, A–E

Scleroderma hardwickiae Kurian, 1955, 4: 78–80, Fig: 52.
Type locality: Timberyard, Tamil Nadu, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 2.4 mm. General colour light brown. Head as long as wide; frons polished; ocelli absent; eye glabrous; median clypeal lobe conspicuous, longer than lateral ones; mandible bidentate; antenna with 13 segments, scape 2.0 × longer than pedicel, pedicel longer than first flagellomere. Pronotum polished; mesonotum shorter than pronotal dorsal area; notauli absent; mesoscuto-mesoscutellar suture absent. Metapectal-propodeal disc longer than wide; metapostnotal median carina absent. Apterous. Metasoma polished. Male. Unknown.

Material examined. Holotype: [INDIA, *Tamil Nadu*,] Madras, Timberyard, ex: *Hardwickia pinnata,* parasitic on Lycidae, 13-X-1941, C.F.C. Beeson, S.F.B. 1460, RRD 490, BCR 136, Cage 606.

Type conditions. Holotype completely dissected on slide Nº. 111/B. *On slide*: S1 C1—head; antenna without apical segment; mesosoma with right coxae attached, pronotum and mesoscutum separated; metasoma; three coxae and some fragments of legs.

Hosts. Coleoptera: Lycidae.

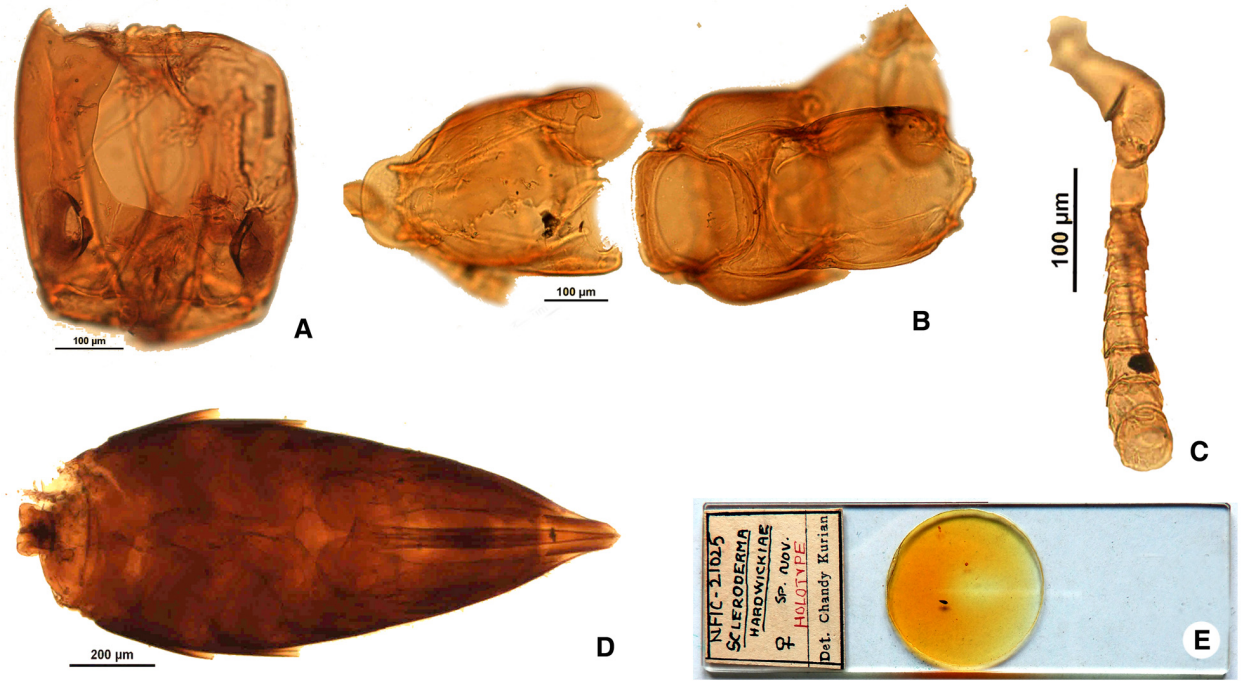

FIGURE 44. A–E. *Sclerodermus hardwickiae* Kurian, 1955. Holotype. **A.** Head, frontal view; **B.** Mesosoma parts, dorsal view; **C.** Antenna; **D.** Metasoma, dorsal view. **E.** One slide of holotype.

45. *Sclerodermus mori* Kurian, 1955

Fig. 45, A–I

Scleroderma mori Kurian, 1955, 4: 78, 80, 81, Figs: 53–58.
Type locality: Makum, Lakhimpur, Assam, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 2.5 mm. General colour dark reddish-brown. Head as long as wide; frons weakly coriaceus; ocelli distinct; eye glabrous; median clypeal lobe conspicuous, longer than lateral ones; antenna with 13 segments, scape 2.4 × longer than pedicel, pedicel longer than first flagellomere. Pronotum polished; mesonotum shorter than pronotal dorsal area; notauli absent; mesoscuto-mesoscutellar suture sulcate, posterior margin incurved. Metapectal-propodeal disc longer than wide; metapostnotal median carina absent; first abdominal spiracle laterally placed. Wings nearly hyaline; forewing with pterostigma light brown; hind wing with four hamuli. Metasoma polished. Male. Unknown.

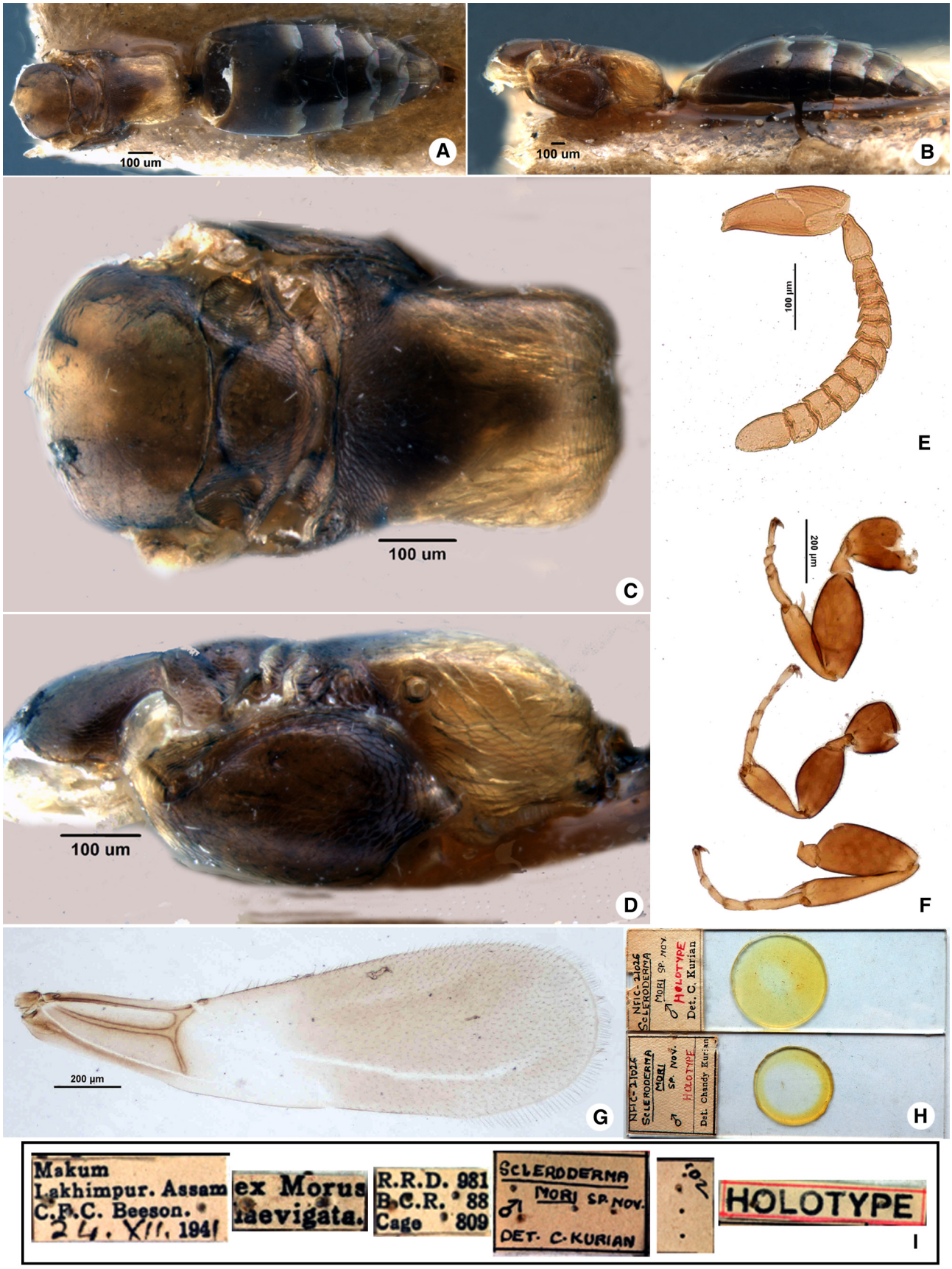

FIGURE 45. A–I. *Sclerodermus mori* Kurian, 1955. Holotype. **A.** Habitus, dorsal view; **B.** Habitus, lateral view; **C.** Mesosoma, dorsal view; **D.** Mesosoma, lateral view; **E.** Antenna; **F.** Legs, top to bottom, pro-, meso- and metaleg; **G.** Forewing; **H.** Two slides of holotype; **I.** Labels.

Material examined. Holotype: [INDIA, *Assam*,] Makun, Lakhimpur, ex: *Morus laevigata,* emerged along with *Pilinus* {*Ptilinus*} *binodulus* Motschulsky (Fam. Anobiidae), 24-XII-1941, R.R.D. 981, HCR 88, Cage 809, C.F.C. Beeson coll.

Type conditions. Holotype partly dissected on slide and remaining rested on the pin. Head is missing. *Pinned*: mesosoma and metasoma. *On slides*: S1 C1—one proleg; two mesolegs; two metalegs—one with tibia and tarsi separated other with coxa separated; one antenna. S2 C1—two forewings; one hind wing; antenna with scape, pedicel and one flagellomere.

Remarks. The holotype is a female, not a male as described by Kurian. The slides of the holotype are also mistakenly labeled as female.

Hosts. Coleoptera: Ptinidae: *Ptilinus binodulus* Motschulsky.

II. Family Chrysididae Latreille, 1802

Subfamily Cleptinae Latreille, 1802

Type genus: *Cleptes* Latreille, 1802

Genus *Lustrina* Kurian, 1955

Lustrina Kurian, 1955, 2: 86.
Type species: *Lustrina assamensis* Kurian, 1955 by original designation.

46. *Lustrina assamensis* Kurian, 1955

Fig. 46, A–I

Lustrina assamensis Kurian, 1955, 4: 87, Figs: 76–80.
Type locality: Assam, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length 8.8 mm. Head, black, wider than long; frons coriaceus; ocelli distinct, anterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin straight; antenna with 13 segments, scape about 2.5 × longer than pedicel, pedicel shorter than first flagellomere. Mesosoma metallic red, with faint golden lustre. Pronotum coriaceous; mesonotum as long as pronotal dorsal area; notauli present, as long as parapsidal signum. Metapectal-propodeal disc metallic green, basally metallic light blue, wider than long; metapostnotal median carina indistinct. Wing pale brown with basal and subapical bands; forewing with pterostigma dark brown. Metasoma dark metallic purple, but basal 4/5 of first tergum metallic green, widely coriaceous. Male. Unknown.

Material examined. Holotype: [INDIA, *Assam*,] Murphulani, 1-XII-1920, H. Inglis coll.

Type conditions. Holotype partly dissected on slide Nº. 48/B and remaining rested on the pin. *Pinned*: body complete, head with left antenna, mesosoma with left meso- and metalegs and right wings, which were weakly attached. *On slides*: not present in NFIC-FRI.

Remarks. Rosa *et al.* (2020) reviewed the holotype and reported the same species from Vietnam.

Hosts. Unknown.

III. Family Dryinidae Haliday, 1833

Subfamily Dryininae Haliday, 1833

Type genus: *Dryinus* Latreille, 1804

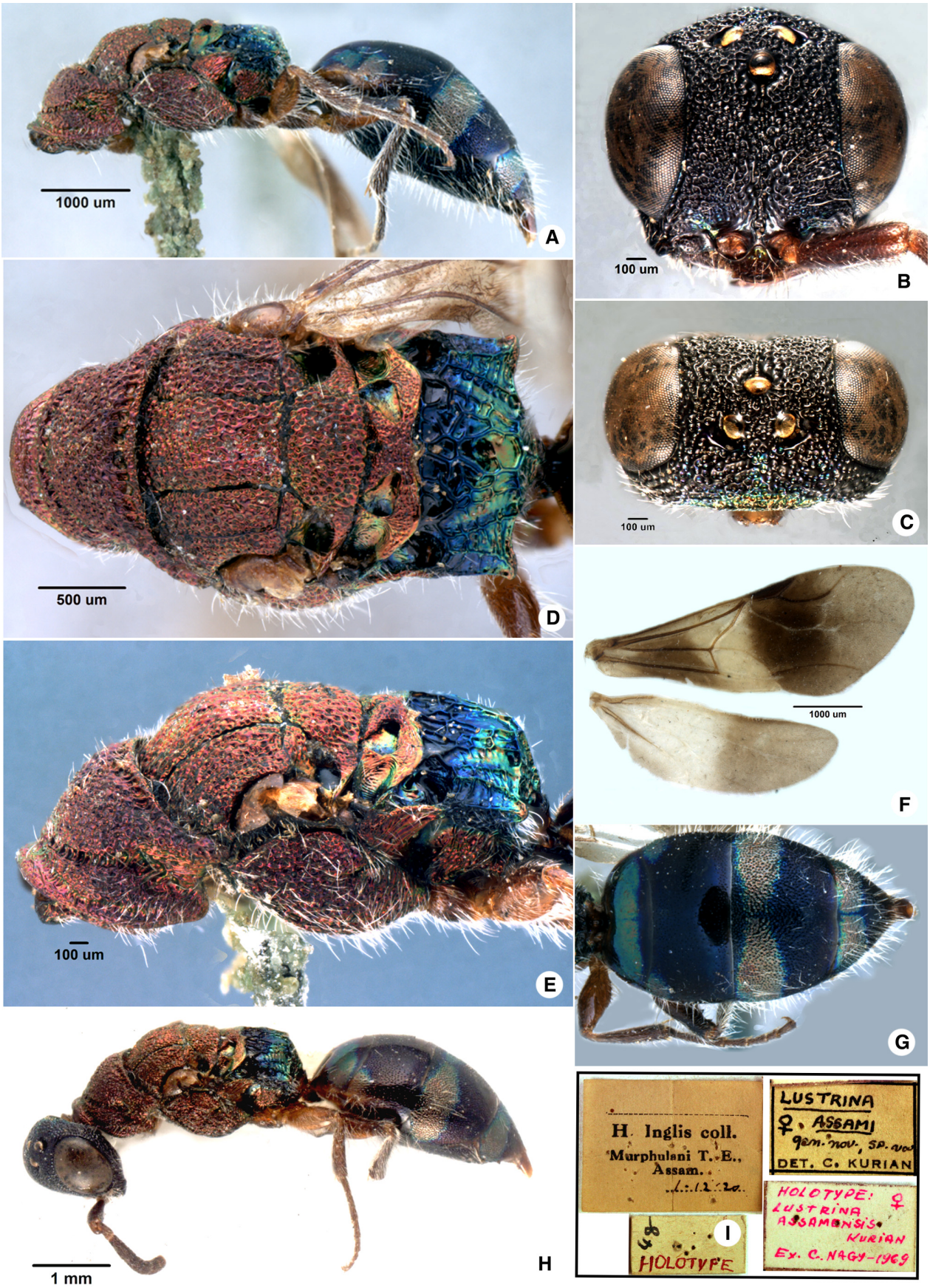

FIGURE 46. A–I. *Lustrina assamensis* Kurian, 1955. Holotype. **A.** Mesosoma and metasoma, lateral view; **B.** Head, frontal view; **C.** Head, lateral view; **D.** Mesosoma, dorsal view; **E.** Mesosoma, lateral view; **F.** Pro and hind wings; **G.** Metasoma, dorsal view; **H.** Habitus, lateral view; **I.** Labels.

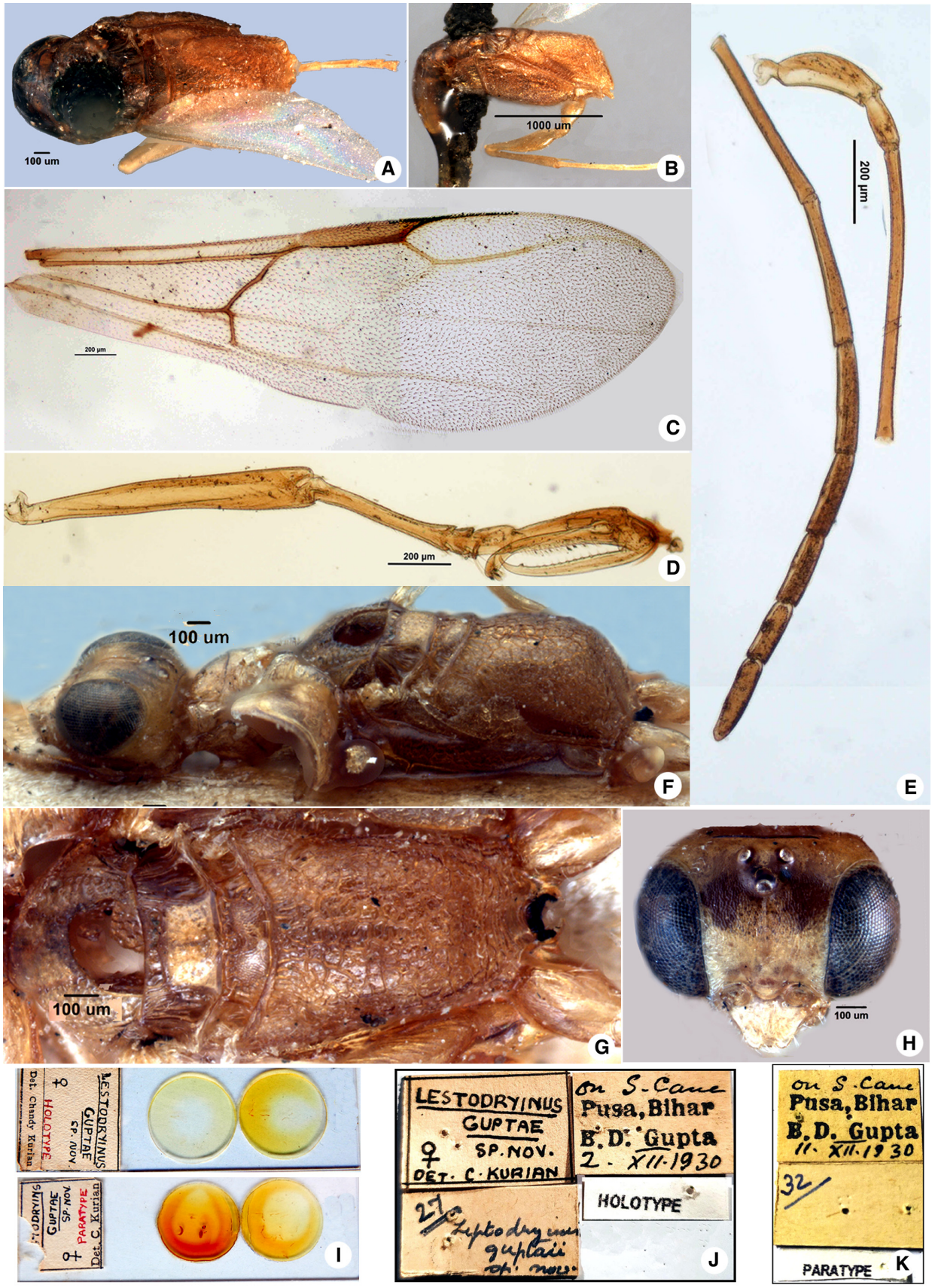

FIGURE 47. A–K. *Dryinus guptae* (Kurian, 1955). **A–E**. Holotype. **A.** Mesosoma, dorsal view; **B.** Mesosoma, lateral view; **C.** Forewing; **D.** Protibia and tarsal segments; **E.** Parts of antenna; **F–H.** Paratype. **F.** Head and mesosoma, lateral view; **G.** Mesosoma, dorsal view; **H.** Head, frontal view. **I.** Two slides, upper of holotype and lower paratype; **J.** Labels of holotype; **K.** Labels of paratype.

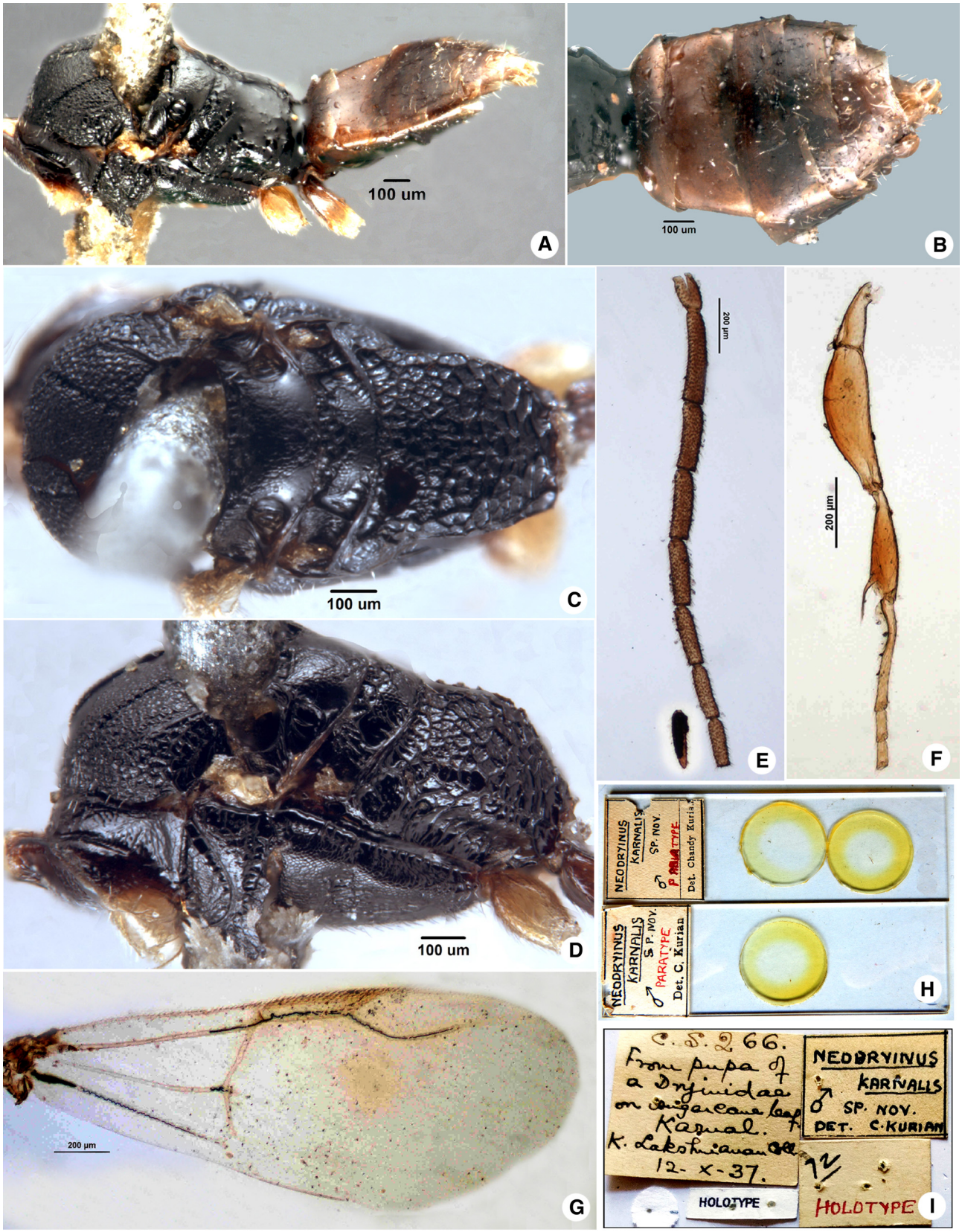

FIGURE 48. A–I. *Neodryinus karnalensis* Kurian, 1955. Holotype. **A.** Mesosoma and metasoma, lateral view; **B.** Metasoma, dorsal view; **C.** Mesosoma, dorsal view; **D.** Mesosoma, lateral view; **E –G**. Paratype. **E.** Antenna; **F.** Proleg; **G.** Forewing. **H.** Two slides of paratype; **I.** Labels of holotype.

Genus *Dryinus* Latreille, 1804

Dryinus Latreille, 1804: 176.
Type species: *Dryinus collaris* (Linnaeus, 1767) = *Dryinus formicarius* Latreille, 1804, by subsequent monotypy.

47. *Dryinus guptae* (Kurian, 1955)
Fig. 47, A–K

Lestodryinus guptae Kurian, 1955, 4: 67–68, Figs: 3, 39, 40, 42–44.
Type locality: Pusa, Bihar, India (♀ holotype, NFIC-FRI).

Diagnosis. Female. Length about 4.9 mm. General colour reddish-yellowish-brown. Head wider than long; frons coriaceus; ocelli distinct, anterior to supra-ocular line; eye glabrous; median clypeal lobe conspicuous, anterior margin convex; mandible tetradentate; antenna with 10 segments, scape as long as pedicel. Pronotum weakly coriaceous; mesonotum as long as pronotal dorsal area; notauli indistinct. Metapectal-propodeal disc longer than wide; metapostnotal median carina absent. Wings nearly hyaline; forewing with pterostigma light brown. Metasoma polished.

Material examined. Holotype: [INDIA], *Bihar*, Pusa, on sugarcane, 2-XII-1930, B. D. Gupta coll. Paratype: 1♀, same data of the holotype, except 11.XI-1930. Male. Unknown.

Type conditions. Holotype partly dissected on slides, and remaining rested on the pin. Head and metasoma are missing *Pinned*: mesosoma with left wings and left metaleg. *On slides*: S1 C1—one forewing and one hind wing. S1 C2 three fragments of antenna; two legs without coxae. Paratype completely dissected on slides. *On slides*: S1 C1—head, mesosoma and metasoma.S1 C2 three pairs of legs; two forewings.

Remarks. Kurian (1955) was probably unaware of the synonymy of *Lestodryinus* Kieffer 1911 with *Dryinus* Latreille, 1804 by Richards (1937) and for this reason, published the species in *Lestodryinus*. The holotype is in too poor a condition to identify and compare it to other dryinids.

Hosts. Unknown.

Subfamily Gonatopodinae Haliday, 1833

Type genus: *Gonatopus* Ljungh, 1810

Genus *Neodryinus* Perkins, 1905

Neodryinus Perkins, 1905: 50.
Type species: *Neodryinus koebelei* Perkins, 1905, by original designation.

48. *Neodryinus karnalensis* Kurian, 1955
Fig. 48, A–I

Neodryinus karnalensis Kurian, 1955, 4: 74, 75, Figs 36–38.
Type locality: Karnal, Haryana, India (♂ holotype, NFIC-FRI).

Diagnosis. Male. Length 2.1 mm–2.8 mm. General colour dark reddish-brown to black. Head as long as wide; frons weakly coriaceus; ocelli distinct; eye setose; median clypeal lobe conspicuous, anterior margin concave; mandible pentadentate; antenna with 10 segments, scape as long as pedicel. Pronotum weakly coriaceous; mesonotum longer than pronotal dorsal area; notauli present, longer than parapsidal signum. Metapectal-propodeal disc as long as wide; metapostnotal median carina absent. Wings hyaline; forewing with pterostigma brown. Metasoma polished. Female. Unknown.

Material examined. Holotype: [INDIA], *Haryana*, Karnal, from pupa of a Dryinid on sugarcane leaf, 12-X-

1937, C.S.266, K. Lakshman coll. Paratype: 1♂, same data of holotype, except reared from sugarcane, X-XI-1935, N. Ayyar coll., Pusa Collection.

Type conditions. Holotype partly dissected on slide Nº. 72/B and remaining rested on the pin. Head is missing. *Pinned*: mesosoma with intact left forewing, left metaleg, right coxae and metasoma. *On slides*: not found in NFIC-FRI. Paratype partly dissected on slide Nº. 2/B and remaining rested on the pin. *Pinned*: not in NFIC-FRI. *On slides*: S1 C1—one forewing and one hind wing; S1 C2—one antenna without scape, apical flagellomeres separated.S2 C1 one leg without coxa.

Remarks. The holotype is in too poor a condition to identify and compare it to other dryinids, and the genus identification is likely wrong.

Hosts. Unknown.

49. *Neodryinus pusaensis* Kurian, 1955

Fig. 49, A–I

Neodryinus pusaensis Kurian, 1955, 4: 75, 76, Figs 39–44.
Type locality: Pusa, India (♂ holotype, NFIC-FRI).

Diagnosis. Male. Length 1.5 mm. General colour dark reddish-brown to black. Head wider than long; frons weakly coriaceus; ocelli distinct; eye setose; median clypeal lobe conspicuous, anterior margin triangular; antenna with 10 segments, scape slightly longer than pedicel. Pronotum coriaceous; mesonotum shorter than pronotal dorsal area. Metapectal-propodeal disc longer than wide; metapostnotal median carina indistinct. Wings hyaline; forewing with pterostigma dark brown. Metasoma polished. Female. Unknown.

Material examined. Holotype: [INDIA *Bihar*,] Pusa, on rice, 10.VIII.1930, C. Nº. 2065, Huq coll.

Type conditions. Holotype partly dissected on slide Nº. 4/B and remaining rested on the pin. *Pinned*: mesosoma, with right forewing, intact. *On slides*: S1 C1—one antenna complete; S1 C2—three legs, one without coxa. S2 C1—slightly cracked head and metasoma. S3 C1—one forewing and one hind wing. S3 C2 one antenna and one leg complete.

Remarks. The holotype is in too poor a condition to identify and compare it to other dryinids.

Hosts. Unknown.

IV. Family Formicidae Latreille, 1809

Subfamily Dolichoderinae Forel, 1878

Type genus: *Dolichoderus* Lund, 1831

Genus *Tapinoma* Förster, 1850

Tapinoma Förster, 1850: 43.
Type species: *Tapinoma collina* (junior synonym of *Formica erratica*) by monotypy.

50. *Tapinoma melanocephalum* (Fabricius, 1793)

Fig. 50, A–G

Neoclystopsenella luffae Kurian, 1955, 4: 133, 134, Figs 251–255.
Type locality: Delhi, India (♂ holotype, NFIC-FRI), synonymized by Guerrero (2018).

Diagnosis. Male. Length 2.4 mm. General colour dark reddish-brown. Head as long as wide; frons weakly coriaceus; ocelli distinct, posterior to supra-ocular line; eye glabrous; mandible pincer-shaped, one tooth apically and small

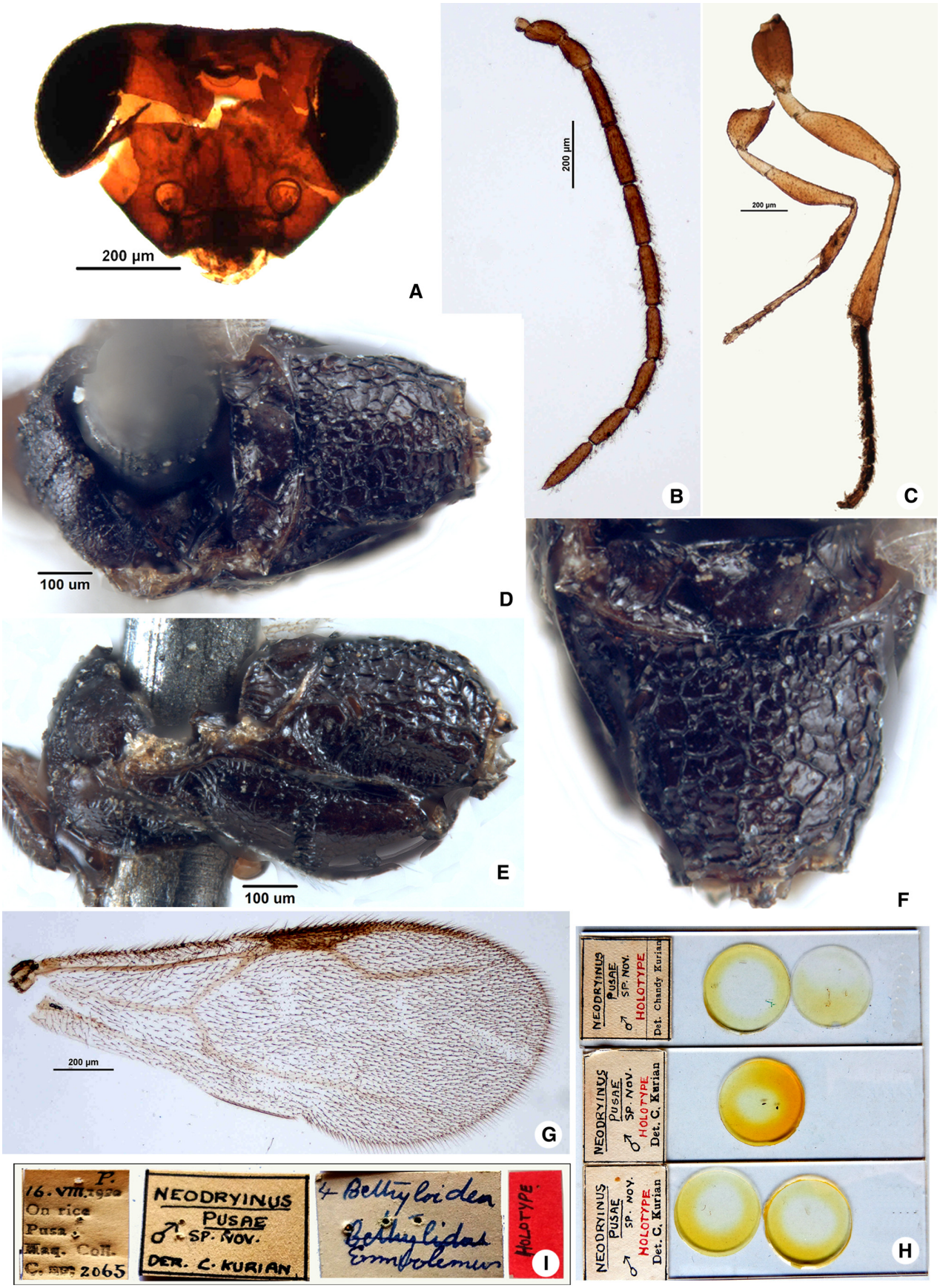

FIGURE 49. A–I. *Neodryinus pusaensis* Kurian, 1955. Holotype. **A.** Head, frontal view; **B.** Antenna; **C.** Legs, left pro and right metaleg; **D.** Mesosoma, dorsal view; **E.** Mesosoma, lateral view; **F.** Metapectal-propodeal disc, dorsal view; **G.** Forewing; **H.** Three slides of holotype; **I.** Labels.

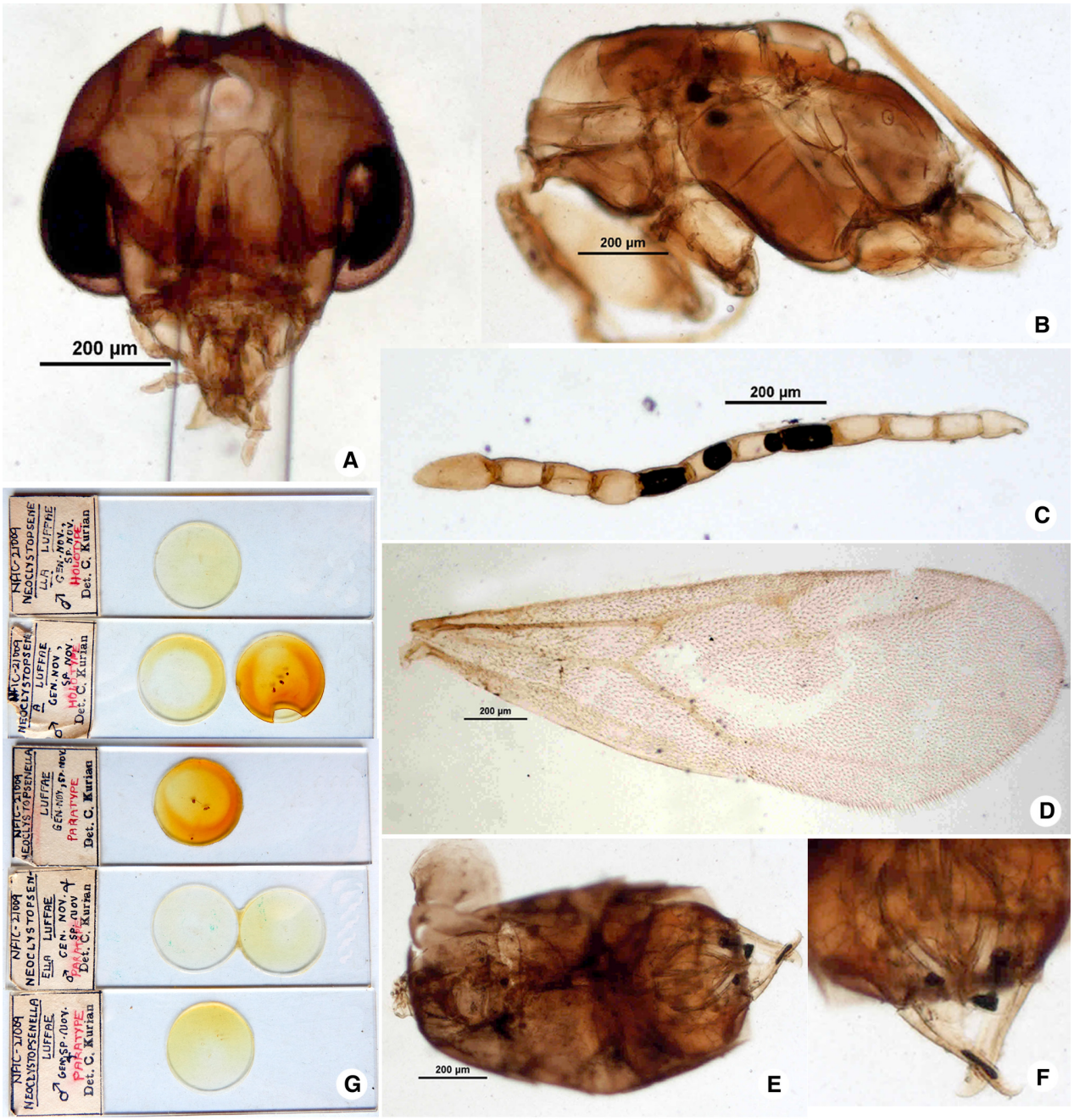

FIGURE 50. A–G. *Tapinoma melanocephalum* (Fabricius, 1793). Holotype. **A.** Head, frontal view; **B.** Mesosoma, lateral view; **C.** Antenna; **D.** Forewing; **E.** Metasoma; **F.** Tip of Metasoma showing ovipositor; **G.** Five slides, upper two of holotype and rest paratypes.

serrations ventrally; palpal formula 6:4; antenna with 13 segments, scape extremely long, surpassing posterior cephalic margin by distance slightly less than distance between frontal carinae. Propleura wide; mesonotum anteriorly curved. Wings hyaline; forewing with pterostigma light brown. Metasoma polished.

Material examined. Holotype: [INDIA,] *Delhi* {*National Capital Territory of Delhi*}, on *Luffa*, 2-VII-1938, Imperial Entomologist, Kapoor coll. Paratypes: 2♂, same data of holotype; 1♂ same data of the holotype, except on cowpea and 5-VII-1938.

Type conditions. Holotype completely dissected on slide. *On slides*: S1 C1—two flagellomeres and two hind wings. S2 C1—head, mesosoma and metasoma. S2 C2—three fragments of legs—first: femur, tibia, tarsi; second and third: tibia and tarsi; antenna without scape. Paratypes completely dissected on slides. S3 C1—head, mesosoma and metasoma. S4 C1—two legs without coxae. S4 C2—one forewing. S5 C1—one antenna; two legs (one without coxae), one forewing and one hind wing.

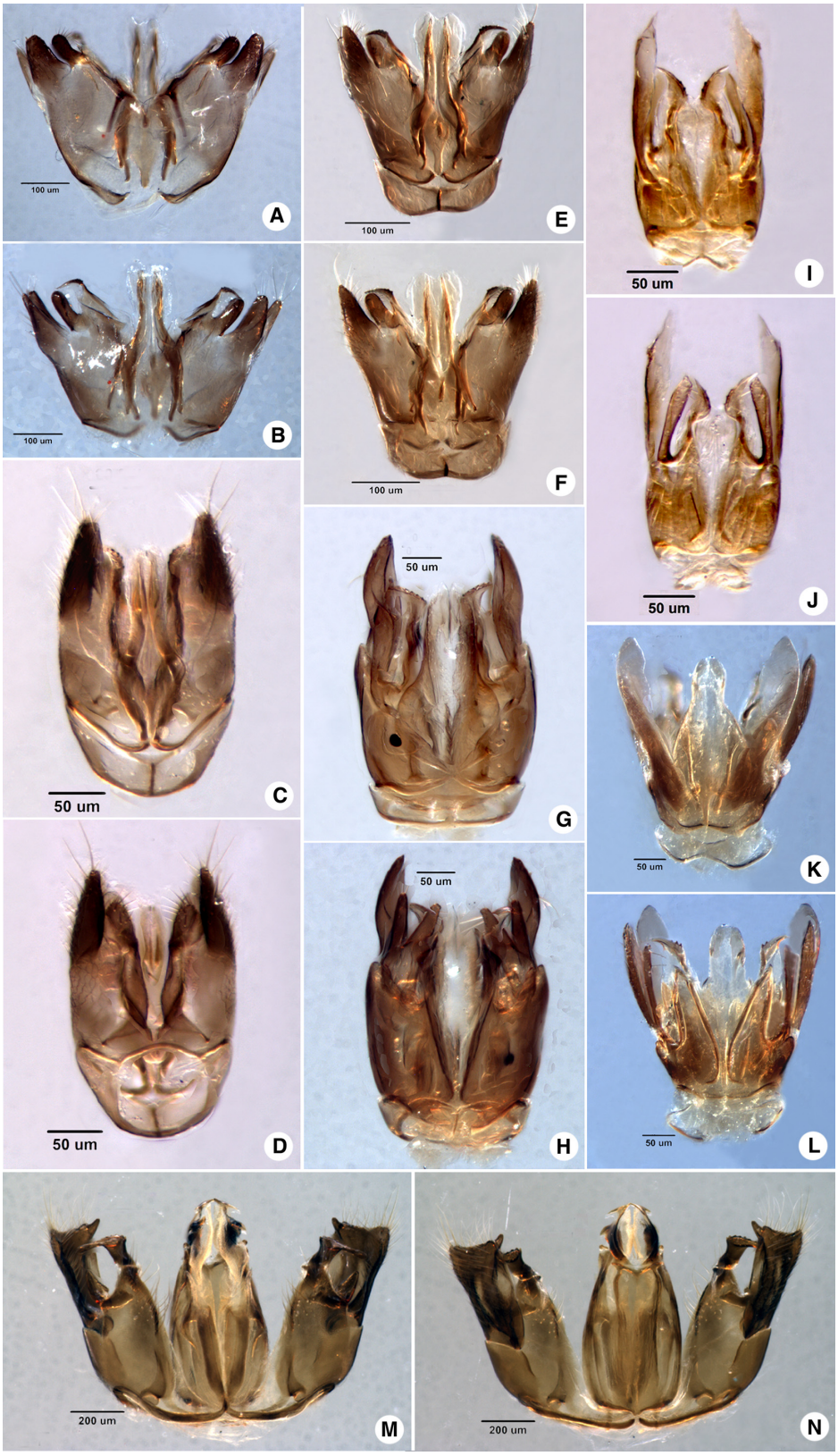

FIGURE 51. A–N. Male genitalia. **A–B.** *Goniozus madrassippattanami* Kurian, 1955, paratype. **A.** dorsal view; **B.** ventral view; **C–D.** *Goniozus salvadorae* Kurian, 1954b, paratype; **C.** dorsal view; **D.** ventral view; **E–F.** *Goniozus thalasodi* Kurian, 1955, holotype; **E.** dorsal view; **F.** ventral view; **G–H.** *Epyris indicae* (Kurian, 1955), holotype; **G.** dorsal view; **H.** ventral view; **I–J.** *Epyris manii* Kurian, 1955, holotype; **I.** dorsal view; **J.** ventral view; **K–L.** *Holepyris patnae* (Kurian, 1955), holotype; **K.** dorsal view; **L.** ventral view; **M–N.** *Pristocera agraensis* (Kurian, 1955), holotype; **M.** dorsal view; **N.** ventral view.

Remarks. This species was originally allocated in *Neoclystopsenella* Kurian, 1955. Brown (1988) synonymized *Neoclystopsenella* with *Tapinoma* and reported: "*The specific identity of Tapinoma luffae new combination remains obscure, but judging from the small size given (2.4 mm) and the wing venation as figured by Kurian, it may be close to or the same as T. melanocephalum or one of its relatives in subgenus Micromyrma*. Recently Guerrero (2018) reviewed the species *Tapinoma luffae* and proposed this species as a junior synonym of *T. melanocephalum*.

Discussion

In this paper, we have revised the taxonomy of 50 species described by Kurian through the study of type specimens considered lost for over six decades. The rediscovery of these type specimens is a demonstration of the value of maintaining public natural history collections, which often provide the only data known about a species (Manning 1991).

Of the chrysidoid species described by Kurian, around 90% are bethylids, and these species correspond to about 40% of all bethylids recorded from India. Therefore, Kurian is the most influential entomologist in the systematic history of Indian Bethylidae until now.

Bethylidae have nine subfamilies (Colombo *et al*. 2020) and the five most speciose subfamilies have species that were described by Kurian. Bethylinae, with 20 of these species, are represented by two genera, *Goniozus* (15 species) and *Odontepyris* (five species). *Goniozus* has 39 species reported from the Indian subcontinent (Santhosh & Narendran 2009; Lim & Lee 2012; Santhosh & Ranjith 2015) and around 38% are Kurian's species. *Odontepyris*, however, has five species reported from India (Lim & Lee 2013), and Kurian described all of them. It is important to note that both bethyline genera are ectoparasitoids of lepidopterous larvae with potential for being biological control agents, and Kurian reported various hosts including Autostichidae, Blastobasidae, Cecidomyiidae, Geometridae, Hyblaeidae, Noctuidae, Phyticidae, and Pyralidae (Kurian, 1952; 1954a,b; 1955; Antony & Kurian 1960; Kurian & Antony 1961).

After Bethylinae, the next subfamily to contain a large number of species described by Kurian are Epyrinae (17 species), distributed into six genera; *Chlorepyris* with two species, *Epyris* with 10 species, *Holepyris* with two species, *Formosiepyris*, *Laelius* and *Trachepyris* with one species each. *Chlorepyris* and *Laelius* are reported from India only by Kurian's species (the reports of *Laelius voracis* Muesebeck, 1939 are doubtful and are not considered here). In relationship to *Epyris*, 19 Indian species were recorded, although the occurrence of *E. niger* needs to be investigated because Kurian (1955) only included this species in the key of the Oriental species of *Epyris*, but did not provide details on the morphology of this species. Outside of *E. niger*, more than 50% of Indian *Epyris* were described by Kurian (Gordh & Móczar 1990, this paper). It is important to note that five species of *Epyris* were transferred from *Neodisepyris* by Azevedo *et al.* (2018). The identity of *Neodisepyris* was a mystery for a long time and many authors have suggested that the species belonging to this genus could be distributed in several other genera. After Kurian (1955), this is the first study that analyzed the type specimens and they are in too poor a condition for more detailed studies. However, we confirmed that the holotype of the type species *N. bombayensis* is an *Epyris* and we agree with the taxonomic act proposed by Azevedo *et al*. (2018, p. 159). *Formosiepyris* is a small Oriental genus with six species, including two from India (Terayama 2004a; this paper), and of these, one was described by Kurian as *Chlorepyris*. Here, we transfer this species (*F. agraensis*) to *Formosiepyris*. *Holepyris* is a cosmopolitan genus and contains four species reported from India, including two described by Kurian (transferred here from *Sclerodermus* and *Epyris*). *Trachepyris* is now reported from India by two species (Gordh & Móczar 1990, this paper). Finally, another genus, *Disepyris* Kieffer, has been reported from India, but it has no species described by Kurian.

Scleroderminae are small wasps with high polymorphism, which inhabit cryptic habitats and are ectoparasites of coleopteran larvae (Azevedo *et al.* 2018; Vargas *et al*. 2020). Among the sclerodermine, four genera were recorded from India; *Cephalonomia*, *Discleroderma* Kieffer, 1904a, *Megaprosternum* Azevedo, 2006 and *Sclerodermus*. The records for *Sclerodermus* and *Cephalonomia* are from Kurian species. However, we need to be cautious as both *Sclerodermus* and *Cephalonomia* can be used to control agricultural pests and can be artificially introduced, as reported by Kumar *et al*. (2014) for *C. stephanoderis* Betrem, 1961. The genus *Prorops* Waterston, 1923 is reported by *P. nasuta* Waterston, 1923, which was artificially introduced (see Infante *et al*. 2003) and we are not including it in this count. *Discleroderma* was reviewed by Azevedo *et al*. (2020) and has an Indian species (*D. indiensis*) and

Megaprosternum (*M. cleonarovorum* Gupta & Azevedo) was first reported by Gupta *et al*. (2017), parasitizing *Cleonaria bicolor* Thomson, 1864 (Coleoptera: Cerambycidae).

Mesitiinae are reported from India by five genera, *Botoryan* Argaman, 2003, *Mesitius*, *Metrionotus* Móczar, 1970, *Parvoculus* Móczar, 1970 and *Sulcomesitius* Móczar, 1970. Of these, *Sulcomesitius* is the only one with species described by Kurian. Móczar (1970, p. 423) transferred the two Kurian species, originally placed in *Mesitius*, to *Sulcomesitius*, however he did not analyze the type specimens. As mentioned above for *Neodisepyris*, we are the first to analyze the holotypes of these species after Kurian (1955), and we agree with the taxonomic acts proposed by Móczar (1970).

Pristocerinae are the most diverse bethylid subfamily, and exhibit strong sexual dimorphism (Azevedo *et al.* 2018). We found records for five pristocerine genera from India, *Apenesia* (see Alencar & Azevedo 2020), *Dissomphalus* Ashmead, 1893 (see Mugrabi & Azevedo 2013), *Eleganesia* Alencar & Azevedo, 2018 (in Alencar *et al.* 2018), *Pristocera* and *Propristocera* Kieffer, 1905. Only *Pristocera* has species described by Kurian (two species: *P. agraensis* and *P. govindrami*), with *P. agraensis* being transferred here from *Pristepyris*.

Other hymenoptera have also been described by Kurian and were rediscovered here, with four being chrysidoids; one Chrysididae, 3 Dryinidae and, outside of Chrysidoidea, one Formicidae. *Lustrina assamensis* (Chrysididae) and *Tapinoma melanocephalum* (Formicidae—senior synonym of *Neoclystopsenella luffae*) were revised by Rosa *et al*. (2020) and Guerrero (2018), respectively. An updated revision of Oriental Dryinidae was presented by Xu *et al.* (2013) and 62 dryinids were recorded from India. Later, two more species were added for the Indian fauna (Olmi *et al*. 2015; Guglielmino *et al.* 2018). However, three species described by Kurian were not listed, so Dryinidae are represented by 67 Indian species. The genus *Dryinus* is now recorded from India by 11 species and *Neodryinus* by three species (Olmi *et al*. 2015, this paper).

We must use caution in affirming these records, because there are many type specimens described by Kurian in poor condition (for example, all dryinids), and the relative abundance of these wasps might be different. However, bethylids, dryinids and chrysidids are understudied in India. Further studies need to be performed in this important location, mainly because it is possible to assume that most ancestral families of Chrysidoidea had a Gondwanan distribution in the Late Cretaceous (Brothers 2011). India, together with Madagascar and the Arabian Peninsula, correspond to the southeastern region of the Gondwanan continent and are important locations for understanding how these wasps evolved.

Tribute to Chandy Kurian

Fig. 52

Chandy Kurian was born on 24 February 1925 at Thiruvanthapuram, Kerala, India. He completed his M.Sc. and Ph.D in Zoology from the School of Entomology at St. John's College, Agra, Uttar Pradesh, India and worked there as a Research Associate and a Lecturer from 1948 to 1955. During his Ph.D. and afterwards, until he was at Agra, he worked on the taxonomy of Bethyloidea (today Chrysidoidea), mostly on Bethylidae and occasionally on Dryinidae. His 1952; 1954a,b and 1955 publications were the first comprehensive systematic account of the superfamily from India.

In 1955, he joined the Central Plantation Crop Research Institute, India (CPCRI) as an Entomologist and mostly worked on agricultural pest protection, especially of coconut plantations. He also worked in collaboration with the Bhabha Atomic Research Centre, Trombay, Mumbai, India in a project on sterile male technique and led a PL- 480 project on *Oryctes rhinoceros* management.

During his research career he published more than 80 research papers and described 104 new taxa with 77 species of Hymenoptera (Insecta), 21 of Malacostrica (Crustacea) and six of Siphonostomatoida (Crustacea):

- 45 of Bethylidae (Hymenoptera);
- 03 of Dryinidae (Hymenoptera);
- 01 of Chrysididae (Hymenoptera);
- 22 of Eulophidae (Hymenoptera);
- 01 of Eupelmidae (Hymenoptera);
- 01 of Formicidae (Hymenoptera);
- 04 of Pteromalidae (Hymenoptera);

- 13 of Bodotriidae (Malacostrica);
- 06 of Caligidae (Malacostrica);
- 02 of Diastylidae (Malacostrica); and,
- 06 of Caligidae (Siphonostomatoida);

He headed the Division of Entomology, CPCRI, and superannuated from there on February 28, 1985. An exact date of the death of Dr. Kurian could not be ascertained, but from reliable sources in CPCRI it was confirmed that he passed away soon after his superannuation between 1987 and 1989.

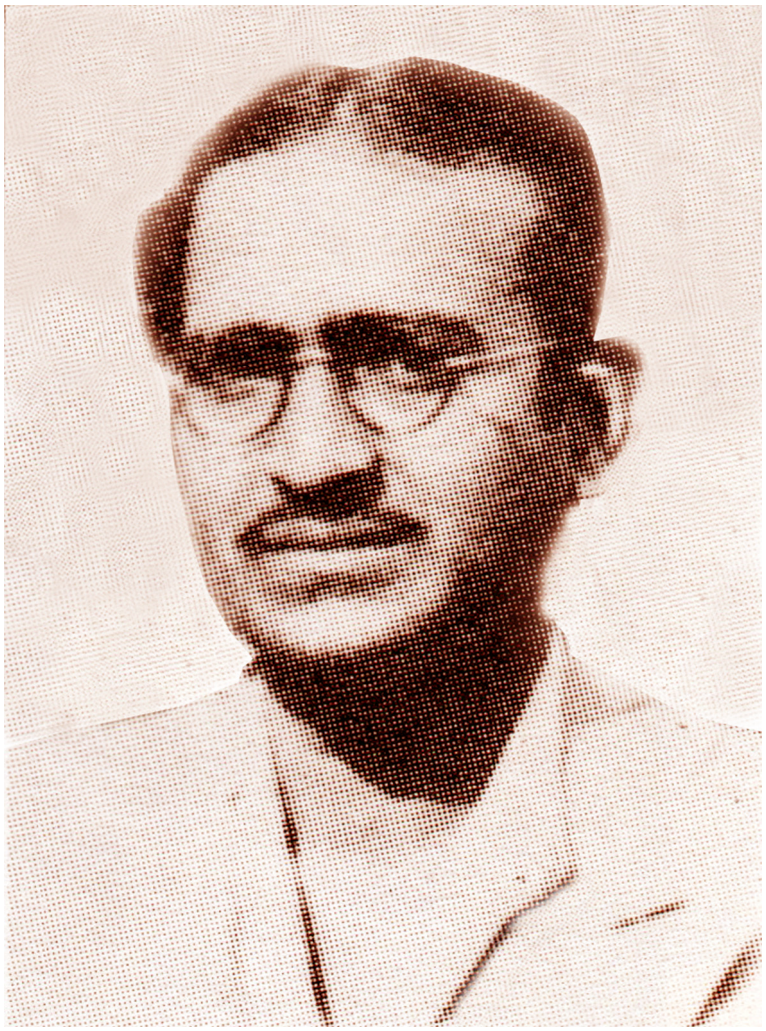

FIGURE 52. Chandy Kurian (Source: International Directory of Coconut workers. Platinum Jubilee of Coconut Research and Development in India—1991. Central Plantation Crops Research Institute, Kasaragod, Kerala India).

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