REVISION OF THE CLEPTES ASIANUS AND TOWNESI GROUPS OF THE WORLD
(HYMENOPTERA, CHRYSIDIDAE, CLEPTINAE)

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Eight Cleptes species were ranged among the asianus-group and one species was left in the
original townesi-group within the subgenus Cleptes s. str. Two new species Cleptes humerosus sp. n. ♂ from Malaysia and C. primorensis sp. n. ♀ from Russia are described. A key and
other information are given.

Key words: taxonomy, Hymenoptera, Chrysididae, Cleptes (Cleptes s. str.) asianus and tow­
nessi-groups

Following the publication of the fundamental work on the Chrysidid Wasps
of the World (KIMSEY & BOHART 1991) eight smaller contributions were issued
by the author regarding the revision of the subfamily Cleptinae (MÓCZÁR 1996a,
b, 1997a, b, 1998a, b, c, 2000). The present paper contains an elaboration of 8+1
species in the subgenus Cleptes s. str. asianus and townesi-groups with key, distri­
butional data and other information. Two new species Cleptes humerosus sp. n. ♂
from Malaysia and C. primorensis sp. n. ♀ from Russia are described. The treat­
ment of the material remains unchanged similarly to the previous revisions. Thus,
here only the new data are listed.

Deposition of materials of museums and institutions: HNHM – Hungarian Natural History
Museum, Budapest; Gainesville – American Entomological Institute, Florida, USA; BMNH – The
Natural History Museum, Department of Entomology, London; Osaka – Osaka Museum of Natural
History, Japan; Ottawa – Canadian National Collection of Insects (former Agriculture and Agri-Food
Canada, Research Branch), Canada.

The following symbols or abbreviations are used throughout this and preceding papers. F-I
(II—III) = flagellomere I (or II—III), MS = malar space (measured across the narrowest interval
(MÓCZÁR 1998c, Fig. 2) between the ventral eye margin and the ventral edge of malar space, between
the two mandibular insertions), MOD = middle ocellus diameter transversally, Ped = pedicellus (mea­
sured in its whole length, including the base, bending resembling a knee), PD = puncture diameter, T
= T-I, II etc. tergum or tergite (the first segment dorsally of the abdomen etc.). The three dots ... indi­
cate parts left out from the original description.
Cleptes asianus-group

Cleptes (Cleptes s. str.) asianus-group MÓCZÁR, 1998c: 506.

Pronotum bisulcate, depressed anteriorly behind collar and posteriorly along posterior margin, usually with a row of 2 distinctly outlined punctures or with smaller, indistinct foveae; longitudinal sulcus medially not present. Torus distinctly present on T-I in some species. T-I impunctate, T-III-IV with double punctures, otherwise of two sorts, small and distinctly large punctures. Mesopleuron usually with scrobal-episternal sulcus. These characters were not ascertained only in galloisi and venustus, owing to want of types; the double punctures are found only on sternite in thaiensis, not as usual on tergite. Head, thorax entirely or largely, abdomen partly with green, greenish blue, violet-purple metallic highlights and with different reflections or tints. Abdomen, moreover, largely black or dark brown with insignificantly extended lighter colour on T-I-II.

The species of asianus-group occur in the East Palearctic (from East Russia) and in the Indomalayan (Oriental) Region across Japan, Korea, Taiwan, Thailand to Malaysia.

Checklist of species

Cleptes asianus KIMSEY, 1987 – Taiwan
Cleptes crassiceps TSUNEKI, 1959 – Japan
Cleptes galloisi UCHIDA, 1925 – Korea
Cleptes humerosus sp. n. – Malaysia
Cleptes primorensis sp. n. – Russia
Cleptes thaiensis TSUNEKI, 1961 – Thailand
Cleptes taiwanus TSUNEKI, 1982 – Taiwan
Cleptes venustus TSUNEKI, 1966 – Japan

KEY TO THE SPECIES

1  Mesonotum almost impunctate ... Clypeus strongly and roundly convex ... Pronotum with a row of some coarse punctures posteriorly ... Lateral angles of propodeum ... with tooth on both sides. ...Tergite I smooth polished, the remainder with dense and fine punctures except posterior margins. ...Face, clypeus, mandibles, scutellum, postscutellum, scape, pedicel, anterior and middle legs except tibiae and tarsi, hind legs except tarsi, green. ... Abdomen entirely violet. 6.5 mm.” (According to Uchida) galloisi UCHIDA ♀
Figs 1–2. 1 = *Cleptes humerosus* sp. n. head, thorax and abdominal tergite I; 2 = *C. taiwanus* posterior part of head, pronotum and mesonotum (orig.)

- Mesonotum more or less punctured. Pronotum, colour different ...

2 Pronotum with a transverse row of larger, deeper and well outlined pits across posterior margin only medially (Fig. 3), or distinctly elongate (Fig. 2). Body largely purple or greenish blue, green, partly black with violet reflections...

- Pronotum with a row of remarkably smaller, only partly shallower and rarely well (Figs 1–2) or mostly indistinctly outlined pits across posterior margin (Fig. 17). Body differently coloured, rarely concolorous...

3 Pronotum somewhat flattened in profile. Lateral angles of propodeum obtuse. The two medial pits in the posterior groove of pronotum markedly larger than the others (Fig. 3), all pits round. Mesopleuron (Fig. 4) with deeply impressed somewhat foveate scrobal sulcus, forming a loop with oblique mesopleural carina. Lower margin of clypeus truncate (Fig. 5). T-II-IV distinctly punctured,
T-III-IV with double punctures. Head, scape, pedicel, thorax, abdomen, femora, tibiae largely purple with greenish blue tints at some places, tegulae, tarsi brown, flagellum dark brown to black. 5 mm  

-asianus KIMSEY ♀

- Pronotum convex in profile. Lateral angles of propodeum small, very shortly produced. The two medial pits on pronotum not markedly larger than the others, similar to the lateral ones, only some pits round. Lateral angles of clypeus with minute tooth (Fig. 6), or obtuse (Fig. 7). T-II-IV with dense, distinct punctures. Body greenish-bluish, abdomen partly black, rarely with purple reflection ... 4

- asianus KLIMSEY ♀

4 Head behind eyes seen from above with occipital margin gently rounded. Ocelli in isosceles triangle. Posterior row of pronotum with narrow, distinctly elongate and sharply outlined pits (Fig. 2); pronotum sparsely punctured. Clypeus strongly raised toward lower margin, lateral angles with a minute tooth directed downwards (Fig. 6). Postscutellum with deep pit in front medially and deeply excavated on posterior margin. Lateral edge of propodeum somewhat convex at base and slightly concave before spine, latter short and obliquely produced. Mesonotum (Fig. 2), scutellum and postscutellum with remarkably fine small and sparse punctures. Head, thorax, abdominal sternite and T-I-IV laterally largely bright greenish blue, propodeum, partly mesonotum and partly T-I-IV purple. 6.5 mm  

taiwanus TSUNEKI ♀

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Figs 3-10. 3-5 = Cleptes asianus: 3 = pronotum, 4 = mesopleuron with scrobal sulcus, 5 = head, front view of face; 6 = C. taiwanus clypeus; 7-10 = C. crassiceps: 7 = clypeus, 8 = mesopleuron with scrobal and praecoxal sulcus, 9 = head viewed from above, 10 = scutellum-propodeum (Figs 3-5: KIMSEY's original drawings, 6: authors's orig; 7-10: TSUNEKI's orig. drawings)
♀: Head behind eyes markedly thick, lateral margin slightly convergent (Fig. 9) nearly parallel. Ocelli in equilateral triangle. Posterior row of pronotum with oval or round, and deeper, moderately sharply outlined pits. Clypeus trapeziform (Fig. 7) with a medial protuberance. Postscutellum strikingly convex with larger deep pit at base medially (Fig. 10) and deeply emarginated on posterior margin. Mesopleuron with foveolate scrobal and praecoxal sulcus (Fig. 8). Lateral edge of propodeum with apical teeth small, broad, triangular and very shortly produced laterally (Fig. 10). Mesonotum-postscutellum with relatively denser, deeper and larger punctures. Head, pronotum greenish blue, mesonotum-postscutellum mostly green or partly purple. Abdomen black, posteriorly with pale purple tints. 8 mm


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"♂: Similar to ♀. F-I nearly twice as long as wide at apex. ...Postscutellum less strongly convex... Vertex, pronotum, mesonotum purple (in paratype bluish). Abdomen black, face, temples, scutellum-propodeum, mesopleuron, sides of abdomen mostly blue to bluish green. 4.3–5.5 mm". (Male according to TSUNEKI) 

5 Pronotal groove different, with well outlined (Fig. 1), or shallow, possibly obscurely outlined row of pits across posterior margin. Head, thorax, entirely green or partly greenish blue

- Posterior groove of pronotum with very small pits or indistinctly outlined foveae (Fig. 17). Body colour: violet with greenish golden or bluish tints and abdomen entirely bluish green (thaiensis); or bluish green and black, partly with golden tints and abdomen black, sides at base of T-II-III with blue spots (venustus)

6 Pronotum with a conspicuous conical corner in front on humerus (Fig. 1). Body rather squat. Head convergent posteriorly behind eyes (Fig. 1) viewed from above. Head, thorax entirely bright green, propodeum with golden reflections. 5.4 mm

- Pronotum normal, without conical corners. Body slender. Head thickened posteriorly viewed from above. Head, thorax dark greenish blue, bluish green or partly black, without golden reflections. 5.9 mm

7 The transverse groove on pronotum anteriorly with well outlined row of pits, posterior one shallow and with rather indistinct punctures (Fig. 11), without a longitudinal impression medially. Lateral sides of propodeum nearly parallel, lateral angles triangular, distinctly produced laterally (Fig. 14). Clypeus trapezoidal (Fig. 13), strikingly raised toward lower margin. Hind ocellar impression crescentiform (Fig. 12) comparatively broad and markedly deep along external margins. Postscutellum with a small and deep pit at anterior margin (Fig. 14) and shallowly excavated posteriorly. 4.2–5.5 mm

- Both transverse rows of pits similar to each other, distinctly foveolate, disc with an impression (Fig. 17) indistinctly outlined medio-posteriorly. Lateral sides of propodeum slightly divergent on basal half (Fig. 18), lateral angles subrectangular, with an obtuse apex. Clypeus subquadrate (Fig. 19), longitudinally raised in the middle, lower margin gently roundly emarginate. Impressions of ocelli normal (Fig. 20), external margin obtusely outlined. Postscutellum

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with a large and deep pit on anterior margin and hardly excavated posteriorly (Fig. 15). 4 mm *venustus* TSUNEKI ♂

**Cleptes asianus** KIMSEY, 1987  
(Figs 3–5)

*Cleptes asianus* KIMSEY, 1987: 56. 1 ♀. Holotype ♀; Taiwan: Wushe (Gainesville).  
*Cleptes asianus*: KIMSEY & BOHART 1990: 59 ♀ (orientalis-group)

Material examined: 1 ♀ holotype. Taiwan: “Wushe, Taiwan 1100 m V-15-83 Henry Townes”, “Holotypes *Cleptes asiana* KIMSEY ♀” red label with author’s writing, 1 ♀ (Gainesville).

Additions to the original diagnosis. Punctures of face distinct, moderately deep (small in KIMSEY). Pronotal punctures small and 2–3 PD apart. Malar space 1.2 MOD long (cf. Fig. 2 MÓCZÁR 1998a), Ped 2.2 times as long as broad, F-I length 2.1 times breadth, F-II 1.1 times as long as broad (Fig. 5). Nervulus antefurcal. Posterior margin of postscutellum with two oval foveae. T-II smooth basally and posteriorly, with dense, moderately deep punctures on its anterior two-thirds; T-III with moderately deep, very dense punctures, T-IV with distinctly deeper punctures and with tiny punctures basally, also double punctures. Body with blue tints especially along eyes and lateral sides of T-IV. Base of mandible purple. Tegulae brown.

Distribution. Taiwan (KIMSEY 1987).

**Cleptes crassiceps** TSUNEKI, 1959  
(Figs 7–10)

*Cleptes crassiceps* TSUNEKI, 1959: 5, 7, 21 Figs 33–38 6 ♀ 3 ♂; Holotype ♀, Japan: Towada (Osaka).  
*Cleptes crassiceps*: KIMSEY and BOHART 1990: 60 ♀ (Tsukuba, satoi-group).


The original description agrees with the holotype, except only as follows: Anterior half of abdominal segments laterally greenish blue, below black with bluish tints and T-IV basally greenish blue, and not “sides of abdomen ... green” (according to TSUNEKI); T-III to a small extent and T-IV mostly with double punctures and not “2 and 3 closely but posteriorly sparsely, 4 more sparsely punctured”.

*Acta zool. hung. 46, 2000*
Addition to the description given in key and MS 1.6 MOD long, Ped 2.1 times, F-I 2.2 times, F-II 0.9 times and F-III 0.8 times as long as wide. Axillae broad, diverging backwards and semicircular basally, trianularly pointed apically, lower side strongly inclined posteriorly, and not "with sides slightly convergent straight backwards".

Variation. ♀ (from Nopporo, paratype): "Head and thorax aeneous green... with a shade of purple in part; scutellum ... green golden... Abdomen black... femora dark brown". – ♂ : (from Koike, paratype) "Head, pronotum...dark purple. Mesonotum black with a faint shade very narrow and linear. Post-medial impression of main part of pronotum: in two paratypes this is definable, in another paratype it is not defined, only a median groove in the middle of the longitudinal line observed" (According to TSUNEKI).


*Cleptes galloisi* Uchida, 1926

*Cleptes galloisi* UCHIDA, 1926 (38): 183, 185, 1♀. Holotype ♀; Korea: Seiryori(?).

*Cleptes galloisi*: TSUNEKI 1959: 5, 12 ♀.

*Cleptes galloisi*: KIMSEY and BOHART 1990: 60 (Japan, orientalis-group).

Material examined: –.

The type locality is unknown (TADACHI 1995). According to TSUNEKI (1959): The "description gives little information as to the specific distinctions... I could not have the chance of examining the specimen". I propose to place it in the *asianus*-group on the basis of the row of pits along the posterior margin on pronotum and the entirely metallic terga.

*Cleptes humerosus* sp. n.

(Fig. 1)


♂ – Length 5.4 mm. Head, thorax, including propodeum, partly scape, pedicel, coxae, femora, tibiae bright green with golden, partly bluish tints; flagellum and rest of legs brown; abdomen dark brown to black, partly with bluish green reflections. T-I posteriorly and T-II anteriorly with a trans-
verse reddish brown and narrow streak. Disc on T-I extensively, T-II with less, T-III with stronger lateral, T-IV-V entirely with bluish green reflections. Wings weakly stained, nearly hyaline; discoidal cell open above, nervulus interstitial. Body with short white hairs.

Head 1.4 times as broad as long. Face and malar space very densely punctured. MS 1.0 MOD long, Ped 2.2 times as long as broad, length of F-I 2.2 times apical breadth, F-II and F-III 1.1 times as long as broad. Frontal sulcus narrow reaching from middle ocellus to clypeus. Lower margin of clypeus slightly emarginate, lateral sides remarkably convergent, corners obtuse. Ocellar triangle hardly acute, nearly rectangular; the pits beside hind ocelli connected by a sharp and narrow sulcus. Vertex with close punctures just before occipital carina; head remarkably convergent laterally behind eyes.

Pronotum short with conspicuously protruding conical corners in front (Fig. 1), surface slightly convex in profile; anterior diameter 1.6 times as broad across humerus as long between collar and posterior margin medially. Both transverse grooves with rather small but well outlined row of pits. The three middle pits slightly larger than the others in the posterior row. Surface of pronotal disc smooth, polished together with mesonotum, scutellum and postscutellum with very fine and scattered punctures. Notaulix deep and rather broad across mesonotum (Fig. 1), parapsidal line short. Scutellum and postscutellum distinctly broader than long. Postscutellum touching scutellum, anterior margin with a deep, large pit medially (Fig. 1) and twice emarginated on posterior margin. Propodeum short, lateral sides convex basally and concave toward the short spine (Fig. 1); surface irregularly and coarsely wrinkled (Fig. 1), horizontal part laterally and posteriorly sharply margined from the vertical part. Scrobal and epicnemo-praecoxal sulcus inside foveolated and with pits, outside with a raised edge, both joined to each other in front into on elongated V-shaped deepening (cf. Fig. 4). Abdominal tergites I and V impunctate, polished; T-II with fine and dense punctures 0.5–2 PD apart; T-III with close, T-IV deeper, both with double punctures.

This new species widely differs from all its related species by its conical corners of pronotum, the smooth and hardly punctured pronotum-scutellum and its bright green colour.

**Cleptes primorensis** sp. n.


♀ – Length 5.9 mm. Head dark greenish blue, mesonotum, scutellum, postscutellum, mesopleuron, scape partly, pedicel, coxae, femora and spots on T-II-IV laterally bluish green; pronotum dark blue to black, with pale violet tints medially, propodeal disc on posterior two-thirds blue. Tibiae and tarsi yellowish brown, with some bluish green tint on upper edge of tibiae. T-I reddish brown basally, along posterior margin and partly T-II-IV posteriorly, remaining parts black. Wings slightly brownish stained below pterostigma, discoidal cell hardly indicated. Head, thorax with short, abdomen with longer white hairs.

Head round, 1.1 times as broad as long. Face partly smooth and with dense punctures; frontal sulcus distinctly developed only on posterior quarter above clypeus. Lateral sides of clypeus moderately converging apically, lower margin truncate, corners with minute spine directed downwards. Ocellar triangle distinctly acute without sulcus. MS 1.4 MOD long, Ped length 2.2 times of breadth.
F-I 2.3 times as long as broad, F-II 1.3 times as long as broad, F-III length 1.2 times of breadth. Occiput margined above; head thickened behind ocelli, lateral sides parallel closely behind eyes, than gradually arcuate toward the middle.

Anterior diameter of pronotum 0.97 times as broad across humerus as length between collar and posterior margin medially. Posterior row of pits well outlined, excepting the smaller ones laterally, some pits are distinctly quadrangular, others oblong; surface of disc in profile slightly convex medially, with a short and shallow longitudinal depression on the second half posteriorly, not reaching the transverse row of pits; punctures on disc distinct, about 1–2 PD apart. Mesonotum finely punctured, 3–4 PD apart, as well as with minute punctures similar as on scutellum, here punctures about 2–3 PD apart, postscutellum with smaller punctures about 1–2 PD apart. Notaulix and parapsidal sulcus deep, the latter nearly reaching pronotum (cf. Fig. 2). Scutellum and postscutellum almost rectangular. Latter touches scutellum, anterior margin with a deep, small pit medially and twice deeply emarginated on posterior margin medially. Propodeum longer, lateral margins parallel, corners right-angled, surface of disc irregularly wrinkled. Mesopleuron with a V-shaped scrobal sulcus (cf. Fig. 4) similarly to that of *humerosus*, but deeper, foveae hardly perceptible at the bottom. T-I and T-II posteriorly impunctate, polished, T-III-IV with double, partly close punctures, T-IV with remarkably larger and deeper punctures.

This species is similar to *taiwanus* by its abdominal punctuation, and partly in its colour, in form of clypeus not truncate (Fig. 6) and not strongly raised towards lower margin, but differs mainly by the structure of pronotum, by the lateral edge of propodeum not convex at base and not slightly concave before spine, latter not short and obliquely produced.

*Cleptes thaiensis* TSUNEKI, 1961
(Figs 11–14)

*Cleptes thaiensis* TSUNEKI, 1961: 367, 3 ♂. Holotype ♂; Thailand: Doi Suthep (Osaka).
*Cleptes thaiensis*: TSUNEKI 1982: 1 ♂ (difference from *dipriovola* TSUNEKI).


Further data are as follows. F-I 2.7 times as long as wide. Head, pronotum rather closely punctured, mesonotum-postscutellum more finely and sparsely punctured, T-II finely, rather densely punctate, posteriorly sparsely so T-III more closely punctate. Sternite double punctured.

Cleptes taiwanus TSUNEKI, 1982
(Figs 2, 6)


Some corrections to the diagnosis are given in the key, and further more as follows: Ocelli in isosceles triangle, and not in equilateral triangle. T-II distinctly punctured, and not “G-2 … finely punctate”; T-III closely, very densely punctured basally, with intensive double punctures, and not “G-3 similarly [to 2] but slightly more closely and distinctly punctured, with impunctate areas narrower”; tegulae greenish blue basally, brown apically with purplish tint, and not “strongly purplish”. Addition to the diagnosis: pronotal disc distinctly and more deeply punctured (Fig. 2) than mesonotum and scutellum; pronotum squat, pronotum (Fig. 2) collar somewhat swollen to a small degree, anterior diameter of pronotum 1.2 times as broad (across humerus) as longitudinal length (along collar and posterior margin medially). MS 1.0 MOD long, Ped 2.2 times as long as wide, F-I 2.3 times, F-II 1.3 times, T-III 1.0 times as long as wide. Nervulus antefurcal. Parapsidal line on mesonotum long, reaching pronotum (Fig. 2). T-I with a V-shaped brownish spot anteriorly; T-I and T-II with brownish and a hyaline streaks posteriorly.

Distribution. Taiwan (TSUNEKI 1982).

Cleptes venustus TSUNEKI, 1966
(Figs 15–20)


Material examined: –.

Further data from the original description are as follows. Antenna: Fig. 16. “Punctures generally sparse … uniform and fine, on vertex strong, on pronotum-postscutellum and mesopleuron scattered and sparsely with hair-bearing punctures… On abdomen 2nd [=T-II] sparsely and finely punctured on anterior than 2/3, 3rd and 4th wholly sparsely punctured.”

Cleptes townesi-group
(Fig. 21)

Cleptes townesi-group: KIMSEY and BOHART, 1990: 58, 64
Cleptes townesi KIMSEY, 1987: 58, 5 ♂ Fig. 2, 6. Holotype ♂; Taiwan: Wu-feng (not Wushe in KIMSEY) (Gainesville).

Material examined: 1 ♂. Taiwan: “Wu-feng, Taiwan April 6, 1983 Henry Townes”, “Holotype Cleptes ♂ townesi Kimsey” (red label) (Gainesville).

The original diagnosis of the group and the description of the species are completed as follows. Pronotum without “distinct” groove or pits etc., in fact pronotum with punctures 1–2 PD apart (in KIMSEY & BOHART), addendum: which continues more finely in the shallow depression along posterior margin, with trace of some minute, less outlined foveolae medially, and with some minute irregular punctures laterally. Malar space 0.3 MOD long, and not 0.8 (measured at the shortest distance [cf. Fig. 2 MÓCZÁR 1998c]). Ped 1.7 times as long as wide, F-II 2.2 (in KIMSEY 2.4, Fig. 21) times as long as wide. Pronotal disc remarkably more deeply punctured than face. Posterior margin of postscutellum twice deeply excavated. Scape, pedicel light brown. T-II with tiny, T-III-IV with fine, scattered, gradually denser punctures, partly with double punctures. Nervulus interstitial.

Abdomen brownish black, T-I partly and all segments laterally brown and posterior margins partly with narrow, lighter brownish streaks. Legs partly yellowish and light brownish. Middle legs, fore coxae, trochanters in front extensively white. Further data (in KIMSEY): face with metallic blue tints. Pronotum flattened in profile. Mesopleuron smooth with a small scrobal pit and deep punctures. Propodeum laterally and metapleuron entirely smooth, polished. T-V emarginate medially. 5.5 mm.

Distribution. Taiwan (KIMSEY 1987).

Acknowledgements – I should like to express my gratitude for the loan of holotypes to curators and technical staff of the following museums and institutes: M. I. KANAZAWA (Osaka), Dr. D. WAHL (Gainesville); Prof. S. SAKAI (Tokyo-Bunkyo) for the definition of the Japanese text and for arranging of the loan of holotypes from Japan; for the loaned material, Dr. L. MASNER (Ottawa), Miss S. LEWIS (London) and Dr. L. ZOMBORI (Budapest).
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Revised version received 5th May, 2000, accepted 20th December, 2000, published 15th May 2001