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Eight *Stenus* Latreille species (Coleoptera, Staphylinidae, Steninae) in Korea

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한국산 딱부리반날개속(딱정벌레목, 반날개과, 딱부리반날개아과)의 미기록종 보고

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ABSTRACT: Eight species of the genus *Stenus* Latreille are documented for the first time in Korea. Among them, three species, *Stenus burjaetus* Puthz, *S. depressus* Puthz and *S. gibbicollis* J. Sahlberg, are recorded for the first time in the Korean peninsula. And five species, *S. coronatus coronatus* L. Benick, *S. decoratus* L. Benick, *S. koreanus* Puthz, *S. rugipennis* Sharp and *S. sharpi* Bernhauer and Schubert, are newly recorded in South Korea. The adult photographs, illustrations of aedeagus and male sternite IX of them, and a taxonomic key of Korean *Stenus* species are presented.

Key words: Coleoptera, Staphylinidae, Steninae, *Stenus*, Korea

초 록: 한국산 딱부리반날개속(*Stenus* Latreille)의 8종에 대해 보고한다. 이들 중, 3종(*Stenus burjaetus* Puthz, *S. depressus* Puthz and *S. gibbicollis* J. Sahlberg)은 한반도산 미기록종이고, 나머지 5종은(*S. coronatus coronatus* L. Benick, *S. decoratus* L. Benick, *S. koreanus* Puthz, *S. rugipennis* Sharp and *S. sharpi* Bernhauer and Schubert)은 남한에서 처음 보고되는 종들이다. 8종의 성충 사진, 수컷의 생식기 및 9번째 복판에 대한 그림과 한국산 딱부리반날개속의 종 검색표를 제공한다.

검색어: 딱정벌레목, 반날개과, 딱부리반날개아과, 딱부리반날개속, 한국

The genus *Stenus* Latreille, 1797 belonging to subfamily Steninae (Coleoptera, Staphylinidae) includes more than 2,300 species worldwide (Puthz, 2008b). This genus is characterized by very large eyes occupying almost whole side of the head, prementum longer than head (Zheng, 1993). In East Asia, 296 species have been recorded in China (Tang and Li, 2013), 265 species in Japan (Naomi and Puthz, 2013; Naomi, 2015a, b) and 41 species in Korea (Kim et al., 1994; Smetana, 2004; Puthz, 2006; Puthz, 2008a; Puthz, 2011; Puthz, 2012a, b, c; Puthz, 2013a, b; Oh and Cho, 2013). Most species occur in habitats with high humidity, like nearby reservoir, pond and river or plant debris of forest and wetland (Rougement, 1983). They hunt prey such as springtail with their protrusible capture apparatus. For the hunting, the labium is protruded by hemolymph pressure and the apex of protrusive apparatus is modified into sticky cushions (Betz, 1996).

While working on Korean Steninae, we identified following eight species for the first time in Korea: *Stenus burjaetus* Puthz, *S. coronatus coronatus* L. Benick, *S. decoratus* L. Benick, *S. depressus* Puthz, *S. gibbicollis* J. Sahlberg, *S. koreanus* Puthz, *S. rugipennis* Sharp and *S. sharpi* Bernhauer and Schubert. We describe these eight species with illustrations adult habitus, aedeagus and male sternite IX.

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Material and Methods

Specimens were dissected last three abdominal segments from the body after softening in hot water. Aedeagi and dissected abdominal segments were mounted in Euparal on slides following the method described by Hanley and Ashe (2003). Photographs of sexual characters were taken with Ricoh GX100 camera attached to Nikon YS100 microscope; habitus photographs were taken with a Canon macro photo lens MP-E 65 mm attached to a Canon EOS 500D camera.

The measurements are as follows: body length − from the anterior margin of the clypeus to the posterior margin of abdominal tergite X; forebody length − from the anterior margin of the clypeus to the apico-lateral angle of elytra; head width − width of the head across the eyes; pronotum width − maximum width of the pronotum; elytra width − maximum width of elytra; pronotum length − length of the pronotum along the midline; elytra length − from the humeral angle to the apico-lateral angle.

The following abbreviations are used: GG, Gyeonggi province; GW, Gangwon province; CB, Chungbuk province; CN, Chungnam province; GB, Gyeongbuk province; GN, Gyeongnam province; JJ, Jeju province. Specimens examined were deposited in the Natural History Museum, Hannam University, Daejeon, Korea (HUNHM).

Taxanomic accounts

Key to the species of the genus *Stenus* in Korea

1. Tarsomere 4 simple ····· 2
- Tarsomere 4 bilobed ····· 27
2. Abdominal tergites III−VI with paratergites ····· 3
- Abdominal tergites III−VI without paratergites ····· ····· *S. pilosiventris* Bernhauer
3. Elytron with an orange spot ····· 4
- Elytron without an orange spot ····· 8
4. Legs reddish brown ····· *S. alienus* Sharp
- Legs black ····· 5
5. Frons weakly concave, with distinct lateral furrows ····· ····· *S. deceptiosus* Puthz
- Frons strongly concave, without lateral furrows ····· 6
6. Interstices of punctures slightly wider than half diameter of puncture at eye inner margins ····· *S. tenuipes* Sharp
- Interstices of punctures narrower than half diameter of puncture at eye inner margins ····· 7
7. Pronotum with sparse punctures at middle portion; punctures on male paratergites less dense ····· *S. falsator* Puthz
- Pronotum with dense punctures at middle portion; punctures on male paratergites dense ····· *S. comma comma* LeConte
8. Each of abdominal tergaites III−VI with 3 or 4 longitudinal keels ····· 9
- Each of abdominal tergaites III−VI without longitudinal keels ····· 23
9. Each of abdominal tergaites III−VI with 3 longitudinal keels ····· 10
- Each of abdominal tergaites III−VI with 4 longitudinal keels ····· 18
10. Elytra as wide as long ····· 11
- Elytra wider than long ····· 15
11. Pronotum with long pubescence ····· ····· *S. lewisius pseudoater* Bernhauer
- Pronotum with very short pubescence or almost absent ··· 12
12. Abdominal paratergite III wider than basal cross section of metatibia; legs yellowish brown to brown, with tip of femora and base of tibiae darker ····· 13
- Abdominal paratergite III as wide as basal cross section of metatibia, or narrow; legs unicolor with reddish brown ···· 14
13. Interstices of punctures on elytra as wide as half diameter of punctures ····· *S. sauteri* Bernhauer
- Interstices of punctures on elytra much narrower than half diameter of punctures ····· *S. clavicornis* (Scopoli)
14. Pubescence on surface of head thin; diameter of punctures on pronotum similar to those of frons ··· *S. japonicus* Sharp
- Pubescence on surface of head thick; diameter of punctures on pronotum larger than those of frons ····· ····· *S. secretus* Bernhauer
15. Pronotum wider than long ····· *S. myohyangensis* Puthz
- Pronotum narrower than long ····· 16
16. Convex portion of interocular not extending the level of eye inner margins; pronotum with distinct median longitudinal furrow ····· *S. distans* Sharp
- Convex portion of interocular extending the level of eye inner margins; pronotum without median longitudinal furrow ····· 17

17. Maxillary palpomeres 1-2 yellow and 3 red; legs reddish brown ····· *S. mammonps mammonps* Casey
- Maxillary palpomere 1 yellow and 2-3 red, legs dark red ····· *S. hammondi* Puthz

18. Interocular area with longitudinal furrows, median portion convex ····· 19
- Interocular area without longitudinal furrows, median portion almost flat ····· 22

19. Pubescence on suface of pronotum long ····· 20
- Pubescence on suface of pronotum very short or almost absent ····· 21

20. Abdominal tergaite III with narrow paratergite, IV−VI completely atrophied except for the trace such on basal; maxillary palpomere 1 yellow and 2-3 red ····· ····· *S. immarginatus* Maklin
- Abdominal tergaites III−VI with paratergites; maxillary palpi unicolor with red ····· *S. koreanus* Puthz

21. Maxillary palpomere 1 yellow and 2-3 red ····· ····· *S. melanarius melanarius* Stephens
- Maxillary palpi unicolor with dark red ····· ····· *S. ruralis* Erichson

22. Body size smaller (2.7-3.0 mm); punctures on surface of elytra strongly dense, interstices mostly confluence ····· ····· *S. ageus* Casey
- Body size larger (3.3-4.1 mm); punctures on surface of elytra slightly dense, interstices smaller than half diameter of punctures ····· *S. canaliculatus* Gyllenhal

23. Pronotum with median longitudinal furrow, each side of middle portion with impression; maxillary palpi unicolor with dark red ····· *S. burjaetus* Puthz
- Pronotum without median longitudinal furrow, each side of middle portion without impression; maxillary palpomere 1 yellow and 2-3 dark red ····· 24

24. Pronotum wider than long or as wide as long ····· 25
- Pronotum narrower than long ····· 26

25. Body size smaller (2.8-3.4 mm), convex portion of interocular extending the level of eye inner margins; pronotum wider than long ····· *S. gibbicollis* J. Sahlberg
- Body size larger (3.0-4.6 mm), convex portion of interocular not extending the level of eye inner margins; pronotum as wide as long ····· *S. latissimus* Bernhauer

26. Convex portion of interocular with dense punctures; punctures on surface of pronotum larger than basal cross section of antennomere 3 ····· *S. morio* Gravenhorst
- Convex portion of interocular with sparse punctures; punctures on surface of pronotum as wide as basal cross section of antennomere 3 ····· *S. pubiformis* Puthz

27. Abdominal tergites III−VI with paratergites ····· 28
- Abdominal tergites III−VI without paratergites ····· 34

28. Tarsomere 3 simple ····· 29
- Tarsomere 3 bilobed ····· 33

29. Antennomere 1 dark brown and 2-11 brown ····· ····· *S. rugipennis* Sharp
- Antennomeres unicolor with yellowish brown or brown ····· 30

30. Body size smaller (2.5-3.7 mm); head wider than elytra ·· ····· 31
- Body size larger (5.2-6.7 mm); head narrower than elytra, or as wide as elytra ····· 32

31. Body brown to dark brown ····· *S. friebi* L. Benick
- Body black ····· *S. merkli* Puthz

32. Convex portion of interocular with puncture; pronotum rugose; elytron with an orange spot ····· ····· *S. coronatus coronatus* L. Benick
- Convex portion of interocular without puncture; pronotum even; elytron without an orange spot ····· ····· *S. sharpi* Bernhauer and Schubert

33. Scapes yellowish brown; legs yellowish brown ····· ····· *S. depressus* Puthz
- Scapes dark red; legs black ····· *S. aruiger* Eppelsheim

34. Head distinctly wider than elytra ····· 35
- Head narrower than elytra ····· 36

35. Convex portion of interocular with dense punctures; pronotum with median longitudinal furrow ····· ····· *S. cephalotes* Sharp
- Convex portion of interocular with sparse punctures; pronotum without median longitudinal furrow ····· ····· *S. nomuraianus* Puthz

36. Body size larger (4.7-6.5 mm) ····· 37
- Body size smaller (2.5-3.5 mm) ····· 42

37. Elytron with an orange spot ····· *S. decoratus* L. Benick
- Elytron without an orange spot ····· 38

38. Scapes dark red; legs black ····· *S. bohemicus* Machulka
- Scapes yellow to brown; legs yellow to brown ····· 39

39. Tip of femora and base to middle of tibiae black ·····

····· *S. cicindeloides* (Schaller)

- Tip of femora black but base to middle of tibiae not black ··· 40

40. Convex portion of interocular with dense punctures ····· 41

- Convex portion of interocular with distinctly sparse punctures ····· *S. mercator* sharp

41. Pronotum as wide as long, with shorter pubescence, especially distinctly shorter on abdomen ····· *S. imitator* Eppelsheim

- Pronotum narrower than long, with longer pubescence, especially distinctly longer on abdomen ··· *S. sedatus* Sharp

42. Interocular portion convex; maxillary palpomere 1 yellow and 2-3 brown; legs with tip of femora and middle to tip of tibiae black ····· *S. oblitus* Sharp

- Interocular portion flat, maxillary palpomeres 1-2 yellow and 3 brown; legs with tip of femora black but middle to tip of tibiae not black ····· 43

43. Scapes black; legs yellow ····· *S. dissimilis* Sharp

- Scapes brown; legs dark brown ····· *S. confertus* Sharp

***Stenus burjaetus* Puthz 긴딱지딱부리반날개(신칭) (Figs. 1, 9, 15)**

Stenus (Nestus) burjaetus Puthz, 1980: 97 (TL: Russia).

Stenus nuntiator Ryvkin, 1987: 266.

Description. Body length 4.4-5.4 mm, forebody length

Figs. 1-8. Habitus. 1: *S. burjaetus* (5.1 mm), 2: *S. coronatus coronatus* (6.5 mm), 3: *S. decoratus* (5.3 mm), 4: *S. depressus* (3.0 mm), 5: *S. gibbicollis* (3.1 mm), 6: *S. koreanus* (3.3 mm), 7: *S. rugipennis* (3.5 mm), 8: *S. sharpi* (5.9 mm). Scale bar = 1 mm.

2.1-2.5 mm. Body black, antennae and maxillary palpi dark red, legs black. Head narrower than elytra (0.77-0.80:1); interocular area with deep longitudinal furrows; median longitudinal area between furrows convex, not extending beyond level of eye inner margins, diameter of large punctures as wide as basal cross section of antennomere 3; surface with dense pubescence. Pronotum wider than long (1.04-1.09:1), disk uneven, with median longitudinal furrow, with a pair of impressions at middle portion. Elytra longer than wide (1.03-1.09:1), almost subquadrate, posterior margin emarginate, disk uneven, middle portion distinctly impressed, suture moderately convex. Abdomen semi-cylindrical; paratergites apparently raised in tergites III–VI, width of paratergite III wider than apical cross section of metafemur. Male sternite IX (Fig. 15) with very short apico-lateral projections, apico-medial margin straight. Aedeagus (Fig. 9) triangularly pointed at apical portion of median lobe, apico-lateral corner slightly angular; parameres not extending at apex of median lobe, each with 6–8 setae at apico-internal area.

Specimens examined. GW: 1♂2♀♀, Sangwonsa Temple, Mt. Odaesan, Dongsan-ri, Jinbu-myeon, Pyeongchang-gun, 20. viii. 2013, K.S. Oh.

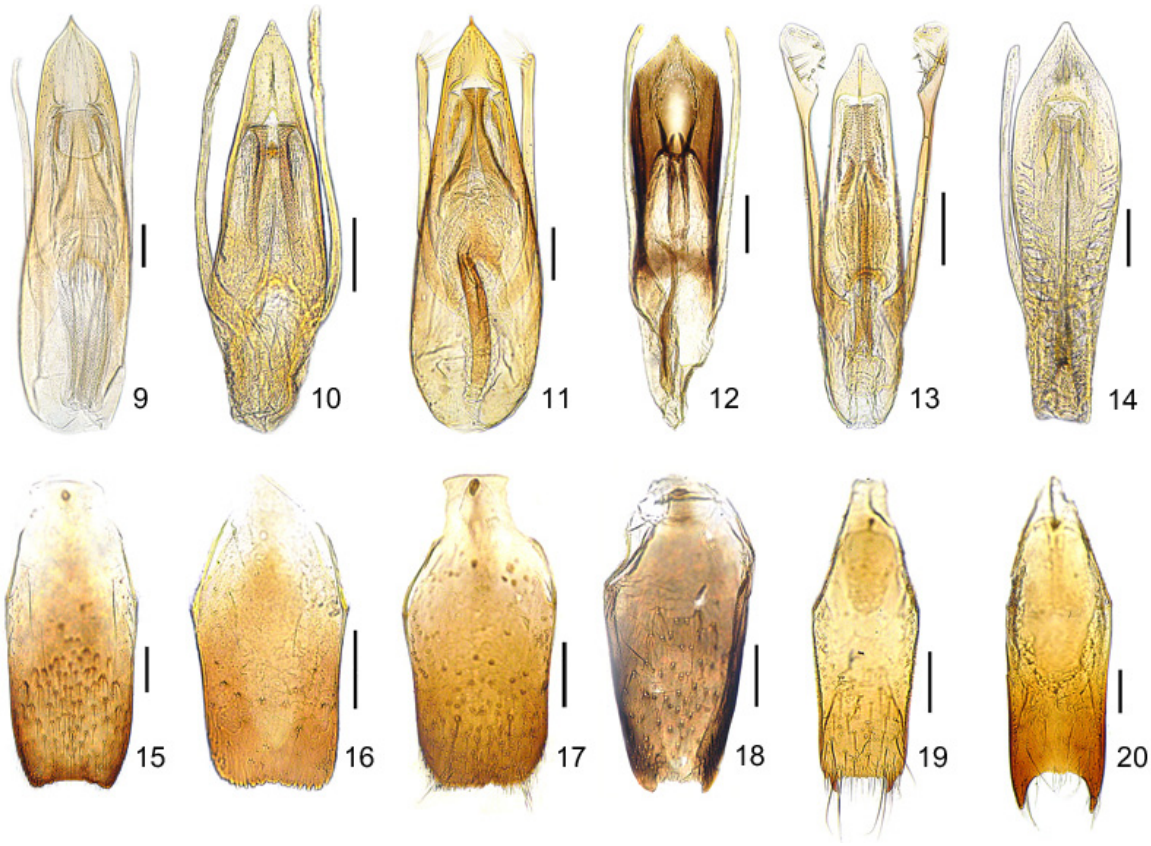
Distribution. Korea (new record), Russia (East Siberia, Far East).

Remarks. This species is closely related to *S. latissimus* Bernhauer but can be distinguished by the following features: maxillary palpi dark red, pronotum with median longitudinal furrow. It also differs from *S. gibbicollis* J. Sahlberg by larger size (4.4-5.4 mm), maxillary palpi dark red, legs black and pronotum with median longitudinal furrow.

***Stenus coronatus coronatus* L. Benick 왕관딱부리반날개 (Fig. 2)**

Stenus coronatus coronatus L. Benick, 1928: 245 (TL: China); Puthz, 1974a: 160 (North).

Stenus zipanguensis watanabei Puthz, 1968: 49.



Figs. 9-20. Aedeagus (9-14) and male sternite IX (15-20). 9, 15: *S. burjaetus*, 10, 16: *S. depressus*, 11, 17: *S. gibbicollis*, 12, 18: *S. koreanus*, 13, 19: *S. rugipennis*, 14, 20: *S. sharpi*. Scale bar = 0.1 mm.

Description. Body length 6.5-6.7 mm, forebody length 2.8-3.1 mm. Body black, antennae yellowish brown, gradually becoming darker toward apical, maxillary palpi with palpomeres 1-2 yellow, palpomere 3 red, legs yellowish brown with tip of femora and base of tibiae darker. Head narrower than elytra (0.91-0.93:1); interocular area with longitudinal furrows; median longitudinal area between furrows convex, extending beyond level of eye inner margins, punctures slightly sparser on median area than inner margins of eyes; diameter of large punctures as large as apical cross section of antennomere 3; surface with thin pubescence. Pronotum narrower than long (0.89-0.93:1), disk uneven, punctures rugose and confluent, pubescence of surface almost absent. Elytra slightly wider than long (1.04-1.06:1), disk almost even, suture moderately convex, each elytron with an orange spot, surface with thin pubescence. Abdomen semi-cylindrical; paratergites apparently raised in tergites III−VI, paratergite III as wide as apical cross section of metatibia; surface with thick pubescence.

Specimens examined. GW: 1♂2♀♀, Mt. Gyebangsan, Jaun-ri, Nae-myeon, Hongcheon-gun, 10. viii. 2012, K.S. Oh; 1♀, Nodong valley, Nodong-ri, Yongpyeong-myeon, Pyeongchang-gun, 23. vi. ~ 3. viii. 2006, P. Tripotin.

Distribution. Korea (new record - South), China (Beijing, Heilongjiang, Jilin, Sichuan, Yunnan), Russia (Far East).

Remarks. This species is closely related to *S. sharpi* Bernhauer and Schubert but can be distinguished by the following features: convex portion of interocular with punctures, pronotum rugose and elytron with an orange spot. This species was collected very rarely by sifting leaf litter in forests.

***Stenus decoratus* L. Benick 치레딱부리반날개 (Fig. 3)**

Stenus decoratus L. Benick, 1914: 152 (TL: North); Puthz, 1974a: 160 (North); Puthz, 1974b: 440 (North).

Stenus jureceki Rambousek, 1921: 82.

Description. Body length 5.0-5.6 mm, forebody length 2.4-2.6 mm. Body black, antennae brown, gradually becoming darker toward apical, maxillary palpi yellow, legs yellowish brown with tip of femora and base of tibiae black. Head narrower than elytra (0.80-0.92:1); interocular area with shallow longitudinal furrows; median longitudinal area between furrows slightly convex, not extending beyond level of eye inner margins; punctures of surface round, sparser on median area than inner margins of eyes; diameter of large punctures as large as apical cross section of antennomere 3; surface with long pubescence. Pronotum narrower than long (0.91-0.97:1), disk uneven, widest before middle, lateral margins moderately constricted at base. Elytra wider than long (1.04-1.14:1), almost subquadrate, posterior margin emarginate, disk almost even, each elytron with an orange spot. Abdomen cylindrical; without paratergites except for the trace on basal of tergite III, tergites IV-VI completely atrophied.

Specimens examined. GG: 1♂, Deokbong-ri, Yangseong-myeon, Anseong-si, 11. vi. 2011, H.K. Min; CB: 1♂, Mt. Sosokrisan, Baekya-ri, Geumwang-eup, Eumseong-gun, 8. v. 2014. H.K. Min; CN: 1♀, Bokcheonsa Temple, Dong-gu, Gao-dong, Daejeon-si, 10. vi. 2013, H.K. Min.

Distribution. Korea (new record - South), China (Hebei, Heilongjian, Jiangxi), Russia (Far East).

Remarks. This species is easily distinguished from other Korean *cicindeloides* group by elytron with an orange spot. This species was collected very rarely by sweeping in grasslands near wetlands.

***Stenus depressus* Puthz 움푹딱부리반날개(신칭) (Figs. 4, 10, 16)**

Stenus (Hemistenus) depressus Puthz, 1973: 88 (TL: Russia).

Description. Body length 3.0 mm, forebody length 1.5 mm. Body black, anterior margin of labrum yellowish brown, antennae yellowish brown, maxillary palpi yellow, legs yellowish brown. Head as wide as elytra (1:1); interocular area with longitudinal furrows; median longitudinal area between furrows slightly convex, slightly extending beyond level of eye inner margins; punctures sparser on median area than inner margins of eyes; diameter of large punctures as wide as apical cross section of antennomere 3; surface with dense pubescence. Pronotum as long as wide (0.96:1), disk even, widest before middle, lateral margins moderately constricted at base, pubescence without distinct median longitudinal portion. Elytra longer than wide (1.18:1), almost subquadrate, constricted at base, gradually broaden posteriorly, posterior margin slightly emarginate, disk almost even, suture moderately convex. Abdomen semi-cylindrical; paratergites apparently raised in tergites III−VI,

paratergite III as wide as apical cross section of metatibiae. Male sternite IX (Fig. 16) without apico-lateral projections, apico-medial margin serrate. Aedeagus (Fig. 10) with triangularly pointed at apical portion of median lobe; parameres extending beyond apex of median lobe, each with 8−13 setae at apico-internal area.

Specimens examined. GW: 1♂, Myeongpa beach, Myeongpa-ri, Hyeonnae-myeon, Goseong-gun, 18. ix. 2012, K.S. Oh.

Distribution. Korea (new record), China (Sichuan, Heilongkiang), Japan (Hokkaido, Honshu), Russia (East Siberia, Far East), Taiwan (Taoyuan Hsien, Ilan Hsien).

Remarks. This species is closely related to *S. auriger* Eppelsheim but can be distinguished by the following features: antennomere 1 yellowish brown and median longitudinal portion of pronotum without pubescence. This species was collected only one specimen under debris on sand beach.

***Stenus gibbicollis* J. Sahlberg 좀딱지딱부리반날개(신칭) (Figs. 5, 11, 17)**

Stenus gibbicollis J. Sahlberg, 1980: 80 (TL: Mongolia).

Description. Body length 2.8-3.4 mm, forebody length 1.6-1.7 mm. Body black, antennae dark red, maxillary palpi with palpomere 1 yellow, palpomeres 2-3 dark red, legs reddish brown. Head narrower than elytra (0.87-0.92:1); interocular area with longitudinal furrows; median longitudinal area between furrows shallowly convex, not extending beyond level of eye inner margins; diameter of large punctures as wide as apical cross section of antennomere 3; surface with dense pubescence. Pronotum wider than long (1.08-1.18:1), disk uneven, widest before middle, lateral margins moderately constricted at base. Elytra wider than long (1.04-1.12:1), almost subquadrate, posterior margin shallowly emarginate, disk even, suture moderately convex. Abdomen semi-cylindrical; paratergites apparently raised in tergites III−VI, paratergite III as wide as middle cross section of metafemur. Male sternite IX (Fig. 17) without apico-lateral projections, apico-medial margin serrate, slightly emarginated at middle of apico-medial margin. Aedeagus (Fig. 11) triangularly pointed at apical portion of median lobe, apico-lateral coner slightly angular; parameres not extending at apex of median lobe, each with 7−10 short setae at apico-internal area.

Specimens examined. GW: 6♂♂2♀♀, Osaek-ri, Seomyeon, Yangyang-gun, 30. vii. 2014, S.G. Lee, J.S. Lee, W.J. Jeong; 1♂, Sangwonsa Temple, Mt. Odaesan, Temp. 21. viii. 2013, K.S. Oh; 1♂, Baekdamsa Temple, Mt. Seolaksan, 21. viii. 2013, K.S. Oh; 1♀, Baekdam valley, Mt. Seoraksan, Bukmyeon, Inje-gun, 10. vi. 2011, T.K. Kim; GN: 4♂♂2♀♀, Chilseon valley, Chuseong-ri, Macheon-myeon, Hamyang-gun, 6. vi. 2012, K.S. Oh; 2♂♂2♀♀, same data as former except for 13. vi. 2010, J.G. Lee.

Distribution. Korea (new record), Finland, Mongolia, Norway, Russia (East Siberia, Far East), Sweden.

Remarks. This species is closely related to *S. latissimus* Bernhauer but can be distinguished by the following features: smaller size (2.8-3.4 mm), legs reddish brown and convex portion of interocular area shallower. It also differs from *S. burjaetus* Puthz by smaller size (2.8-3.4 mm), maxillary palpomere 1 yellow, maxillary palpomeres 2-3 dark red, legs reddish brown and pronotum without median longitudinal furrow.

***Stenus koreanus* Puthz 한국딱부리반날개(신칭) (Figs 6, 12, 18)**

Stenus (*Nestus*) *koreanus* Puthz, 1991: 105 (TL: North Korea).

Description. Body length 3.2-3.3 mm, forebody length 1.7-1.8 mm. Body black, antennae dark red, maxillary palpi red, legs dark red. Head narrower than elytra (0.75-0.83:1); interocular area with shallow longitudinal furrows; median longitudinal area between furrows slightly convex, slightly extending beyond level of eye inner margins; diameter of large punctures as wide as basal cross section of antennomere 3; surface with dense and long pubescence. Pronotum narrower than long (0.92-0.96:1), disk almost even, widest before middle, lateral margins moderately constricted at base. Elytra narrower than long (0.91-0.96:1), almost subquadrate, posterior margin almost straight, disk almost even, suture moderately convex. Abdomen semi-cylindrical; paratergites apparently raised in tergites III−VI, each of tergites III−VI with 4 short longitudinal keels, paratergite III as wide as apical cross section of metatibia. Male sternite IX (Fig. 18) with short apico-lateral projections, apico-medial margin serrate. Aedeagus (Fig. 12) obtusely pointed at apical portion of median lobe, apico-lateral

coner moderatly gentle; parameres extending slightly beyond apex of median lobe, each with 5–8 setae at apico-internal margins.

Specimens examined. GW: 1♂1♀, Heul-ri, Ganseong-eup, Goseong-gun, 1. v. 2015, Y.B. Cho; 1♂1♀, Mt. Odaesan, Jinbu-myeon, Pyeongchang-gun, 27. v. 2010, T.K. Kim; 1♀, Sangwonsa Temple, same data as former except for 27. v. 2010, I.S. Yoo, S.G, Lee; 1♂, Mt. Bangtaesan, Jogyeong-dong, Girin-myeon, Inje-gun, 23. vi. 2009, T.K. Kim; 1♀, Sangwonsa Temple, Mt. Odaesan, Jinbu-myeon, Pyeongchang-gun, 19. iv. 2007, T.K. Kim, Y.H. Kim.

Distribution. Korea (new record - South), China (Jilin), Russia (Far East).

Remarks. This species is closely related to *S. pubiformis* Puthz but can be distinguished by the following features: convex portion of interocular area extending slightly beyond level of eye inner margins and maxillary palpi red.

***Stenus rugipennis* Sharp 황다리딱부리반날개 (Figs. 7, 13, 19)**

Stenus rugipennis Sharp, 1874: 85 (TL: Japan); Puthz, 1979: 122 (North).

Stenus conformis Eppelsheim, 1886: 44.

Stenus sharpianus Cameron, 1930: 205.

Stenus namazu Hromádka, 1979: 101.

Description. Body length 3.2-3.8 mm, forebody length 1.5-2.0 mm. Body black, antennae with antennomere 1 dark brown, antennomeres 2-8 brown, antenomeres 9-11 dark brown, maxillary palpi with palpomeres 1-2 yellow, palpomere 3 red, legs brown. Head slightly narrower than elytra (0.92-0.96:1); interocular area with longitudinal furrows; median longitudinal area between furrows slightly convex, not extending beyond level of eye inner margins; diameter of large punctures as large as apical cross section of antennomere 2. Pronotum as wide as long (0.96-1.03:1), disk slightly uneven, widest before middle, lateral margins moderately constricted at base, surface with thin pubescence. Elytra as wide as long (1.01-1.02:1), almost subquadrate, posterior margin emarginate, disk almost even, suture moderately convex. Abdomen semi-cylindrical; paratergites apparently raised in tergites III–VI, paratergite III as wide as middle cross section of metatibia. Male sternite IX (Fig. 19) with long apico-lateral projections, apico-medial margin serrate. Aedeagus (Fig. 13) with triangularly obtuse at apical portion of median lobe, apico-lateral coner gentle; parameres extending beyond apex of median lobe, each with 10–15 setae at apico-internal margins.

Specimens examined. GG: 1♂, Is. Sindo, Sindo-ri, Bukdo-myeon, Ongjin-gun, Incheon-si, 13. vii. 2007, H.K. Min; GW: 17♂♂7♀♀, Hwajinpo beach, Chodo-ri, Hyeonnae-myeon, Goseong-gun, 10. vi. 2010, K.S. Oh; 1♂, Odaecheongyo bridge, Jinbu-myeon, Pyeongchang-gun, 16. v. 2006, K.S. Oh; 2♂♂8♀♀, Mt. Bokjusan, Seo-myeon, Cheolwon-gun, 25. ix. 2005, Y.B. Cho; CB: 2♂♂1♀, Mt. Minjujisan, Yeongdong-gun, 7. ix. 1997, Y.B. Cho; 1♂, Mulhan valley, Mulhan-ri, Sangchon-myeon, Yeongdong-gun, 2~3. ix. 1988, Y.B. Cho; CN: 1♂, Yugok-ri, Songak-myeon, Asan-si, 10. vii. 2014, K.S. Oh; 3♂♂1♀, Mt. Chilgabsan, cheongyang-gun, 27. iv. 2011, Y.G. Ban, S.G. Lee; 1♂, Anmyeon forest resort, Is. Anmyeondo, Anmyeon-eup, Taean-gun, 26. viii. 2006, H.K. Min; 1♂, Boseoksa Temple, Seokdong-ri, Nami-myeon, Geumsan-gun, 12. ix. 1986, Y.B. Cho; 1♂, Gapcheon stream, Doan-dong, Seo-gu, Daejeon-si, 24. ix. 2014, K.S. Oh; 1♂1♀, Sutonggol, Gyesan-dong, Yuseong-gu, Daejeon-si, 4. v. 2008, K.S. Oh; GB: 1♂, Taeharyeong, Is. Ulleungdo, Taeha-ri, Seo-myeon, Ulleung-gun, 26. vi. 2012, K.S. Oh; 1♀, Bongrae valley, Is. Ulleungdo, Jeodong-ri, Ulleung-eup, Ulleung-gun, 25. vi. 2012, Y.B. Cho; 1♂, Yugeumsa Temple, Mt. Chilbosan, Geumgok-ri, Byeonggok-myeon, Youngdeok-gun, 13. v. 2011, H.K. Min; 1♂, Mochagol, Hwangryong-dong, Gyeongju-si, 22. v. 2007, Y.B. Cho; 1♀, Mochagol, Hwangryong-dong, Gyeongju-si, 26. vi. 2007, H.K. Min; 1♂, Tonggumi, Is. Ulleungdo, Seo-myeon, 31. vii.~1. viii. 2001, Y.B. Cho; 2♂♂2♀♀, Naribunji nr. Spring resort, Is. Ulleungdo, buk-myeon, 1. viii. 2001, Y.B. Cho; JJ: 1♀, Seogwipo-si, 13. ix. 1986, S.H. Jung.

Distribution. Korea (new record - South), China (Fujian, Guizhou, Shaanxi, Sichuan), Japan (Hokkaido, Honshu, Kyushu, Shikoku), Russia (East Siberia, Far East), Taiwan.

***Stenus sharpi* Bernhauer and Schubert 검정긴딱부리반날개 (신칭) (Figs. 8, 14, 20)**

Stenus sharpi Bernhauer and Schubert, 1911: 185 (TL: Japan).

Stenus palpalis Sharp, 1889: 329.

Stenus (*Parastenus*) *sharpi*: Puthz, 1991: 107 (North).

Description. Body length 5.2-6.5 mm, forebody length 2.5-2.9 mm. Body black, antennae yellowish brown, gradually becoming darker toward apical, maxillary palpi with palpomeres 1-2 yellow, palpomere 3 red, legs yellowish brown. Head as wide as elytra (0.96-1.02:1); interocular area with longitudinal furrows; median longitudinal area between furrows convex, extending beyond level of eye inner margins, punctures sparser on median area than inner margins of eyes; diameter of large punctures as large as basal cross section of antennomere 2; surface with thin pubescence. Pronotum narrower than long (0.87-0.94:1), disk uneven, widest before middle, lateral margins moderately constricted at base, punctures slightly rugose, pubescence of surface almost absent. Elytra wider than long (1.03-1.10:1), almost subquadrate, posterior margin slightly emarginate, disk slightly uneven, suture moderately convex, surface with thin pubescence. Abdomen semi-cylindrical; paratergites apparently raised in tergites III–VI, paratergite III as wide as basal cross section of metatibia. Male sternite IX (Fig. 20) with long apico-lateral projections, slightly serrate at middle of apico-medial margin. Aedeagus (Fig. 14) triangularly pointed at apical portion of median lobe, apico-lateral coner gentle; parameres not extending at apex of median lobe.

Specimens examined. GW: 1♂, Mt. Gyebangsan, Jaun-ri, Nae-myeon, Hongcheon-gun, 30. vii. 2014, K.S. Oh; 1♀, Mt. Odaesan, Jinbu-myeon, Pyeongchang-gun, 22. v. 2012, D.H. Lee, Y.G. Ban, S.G. Lee; 1♂, Baekbongryeonggul cave, Jikwon-ri, Imgye-myeon, Jeongseon-gun, 8. v. 2012, Y.K. Choi; 1♀, Mt. Bangtaesan, Sangnam-myeon, Inje-gun, 6. vii. 2011, T.K. Kim, D.H. Lee; 1♂, Gaeinyaksu, Mt. Bangtaegsan, Misan-ri, Sangnam-myeon, Inje-gun, 24. vi. 2009, H.K. Min; 2♀♀, Jogyeongdong valley, Mt. Bangtaesan, Bangdong-ri, Girin-myeon, Inje-gun, 23. vi. 2009, H.K. Min; 1♀, Mt. Bangtaesan, Girin-myeon, Inje-gun, 22. vi. 2009, J.H. Song; 1♂3♀♀, Mt. Jeombongsan, Jindong-ri, Girin-myeon, Inje-gun, 16. viii. 2007, Y.B. Cho; 1♂, Jeokmyolbogung, Mt. Odaesan, Pyeongchang-gun, 22. v. 2012, U.S. Hwang.

Distribution. Korea (new record - South), China (Heilongjiang), Japan (Honshu, Kyushu, Shikoku), Russia (Far East).

Remarks. This species is closely ralated to *S. coronatus coronatus* L. Benick but can be distinguished by the following features: convex portion of interocular without puncture, pronotum even and elytron without an orange spot.

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