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Seven new species of Aspilota Foerster from the Palaearctic Region (Hymenoptera: Braconidae, Alysiinae)

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Abstract – The genera *Aspilota* FOERSTER, 1862 and *Dinotrema* FOERSTER, 1862 are distinguished. Seven new *Aspilota* species are described: *A. digitula* sp. n. (Hungary), *A. impar* sp. n. (Hungary), *A. makita* sp. n. (Hungary, Romania), *A. oroszi* sp. n. (Asiatic Russia), *A. pitralon* sp. n. (Spain), *A. tuberula* sp. n. (Hungary) and *A. vodara* sp. n. (Hungary). With 108 figures.

Key words – *Aspilota*, *Dinotrema*, new species, description.

INTRODUCTION

The genera *Aspilota* and *Dinotrema* were set up by FOERSTER (1862). The latter genus was monotypic and based on *Dinotrema erythropa* FOERSTER, 1862. The species and generic differentiation of *Dinotrema erythropa* rest on the unusually large pair of spiracles of propodeum. The genus *Aspilota*, together with further six genera described by FOERSTER, was separated by the small, or normal, size of the propodeal spiracles (FOERSTER 1862: 268–269). Since FOERSTER's activity the high number of *Aspilota* species has led to the recognition of the true distinction of the genera *Aspilota* and *Dinotrema* (WHARTON 1985, VAN ACHTERBERG 1988):

Aspilota: tentorial (or paraclypeal) pit between clypeus and compound eye is large, i.e. pit touching the margin of the eye (*cf.* Figs 6–8 in WHARTON 1985: 229). Malar suture, if present, short and subvertical (*cf.* Figs 38 and 47 in VAN ACHTERBERG 1988: 68–69). Mesoscutal dimple mostly absent.

Dinotrema: tentorial (or paraclypeal) pit between clypeus and compound eye is small, i.e. pit not touching the margin of the eye (*cf.* Figs 5 and 9–12 in WHARTON 1985: 229 and 231). Malar suture mostly absent (*cf.* Figs 161, 176 and 189 in VAN ACHTERBERG 1988: 78–80). Mesoscutal dimple mostly present.

The number of the *Aspilota* species known to occur in the Holarctic Region is about 120.

DESCRIPTIONS OF THE NEW SPECIES

The following abbreviations of fore wing veins are used in the descriptions (after VAN ACHTERBERG 1993: 4–5): *m–cu* = transverse medio-cubital (or recurrent) vein; *r* = first section of the radial vein; *1–2CU(1)* = first and second sections of the discal vein; *2–SR* = first transverse cubital vein; *3–SR* = second section of the radial vein; *SR1* = third section of the radial vein.

Aspilota digitula sp. n.
(Figs 1–10)

Type material – Female holotype: Hungary, Olaszfalu, Alsópere, swept in a *Quercetum petraeae-cerris*, 26–28 August 1964, leg. J. PAPP. – Holotype is in good condition: glued on a pointed card by mesosternum. The holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 11297.

Etymology – The name "digitula" refers to the finger form of the middle tooth of the mandible.

Description of the female holotype – Body 2 mm long. Antenna nearly as long as body and with 18 antennomeres. First flagellomere three times and penultimate flagellomere 2.6 times as long as broad, flagellum distally faintly attenuating. – Head in dorsal view (Fig. 1) transverse, 1.8 times as broad as long, eye somewhat longer than temple, temple rounded. Tentorial pit relatively narrow and touching compound eye (Fig. 2). Mandible along its median line 1.8 times as long as broad between upper and lower teeth, middle tooth digitiform, i.e. narrow, long and basally weakly broadening (Fig. 3). Eye in lateral view 1.6 times as high as wide, temple beyond eye just less wide than eye. Head polished, face and clypeus with upwards directed hairs.

Mesosoma in lateral view 1.25 times as long as high. Notaulix indicated by a row of a few hairs. Mesoscutal dimple absent. Precoxal suture short, i.e. restricted to middle of mesopleuron, subcrenulate (Fig. 4), hind margin of mesopleuron on its upper half finely crenulte.

Propodeum areolated, areola basalis wide, about five times wider anteriorly than basally, areolae polished, latero-basal pair of areolae uneven, pair of spiracles distinct (Fig. 5). – Hind femur 4.2 times as long as broad distally (Fig. 6). Hind basitarsus as long as tarsomeres 2–4 combined.

Fore wing long, 1.4 times as long as body. Pterostigma eight times as long as wide and issuing *r* proximally from its middle, *r* twice longer than width of pterostigma; *3–SR* twice as long as *2–SR*, *SR1* 2.5 times as long as *3–SR* and reaching tip of wing (Fig. 7). Vein *1–2CU(1)* 2.3 times as long as *m–cu* (Fig. 8, see arrows).

First tergite (Fig. 9) 2.3 times as long as broad behind, beyond pair of spiracles parallel-sided, rugo-rugulose with longitudinal rugae. Tergites 2 and 3 of equal length, tergites (beyond first tergite) polished. Ovipositor sheath as long as hind tarsomeres 1–3 combined or one-fourth shorter than hind tibia. Apical end of ovipositor sheath as in Fig. 10.

Ground colour of body brown, head above and mesoscutum + scutellum somewhat darker. Scape, pedicel and first flagellomere yellow, flagellum brown. Palpi pale yellow. Mandible yellow. Legs yellow. First tergite brownish yellow, second tergite basally with yellowish suffusion. Wings hyaline, veins greyish yellowish.

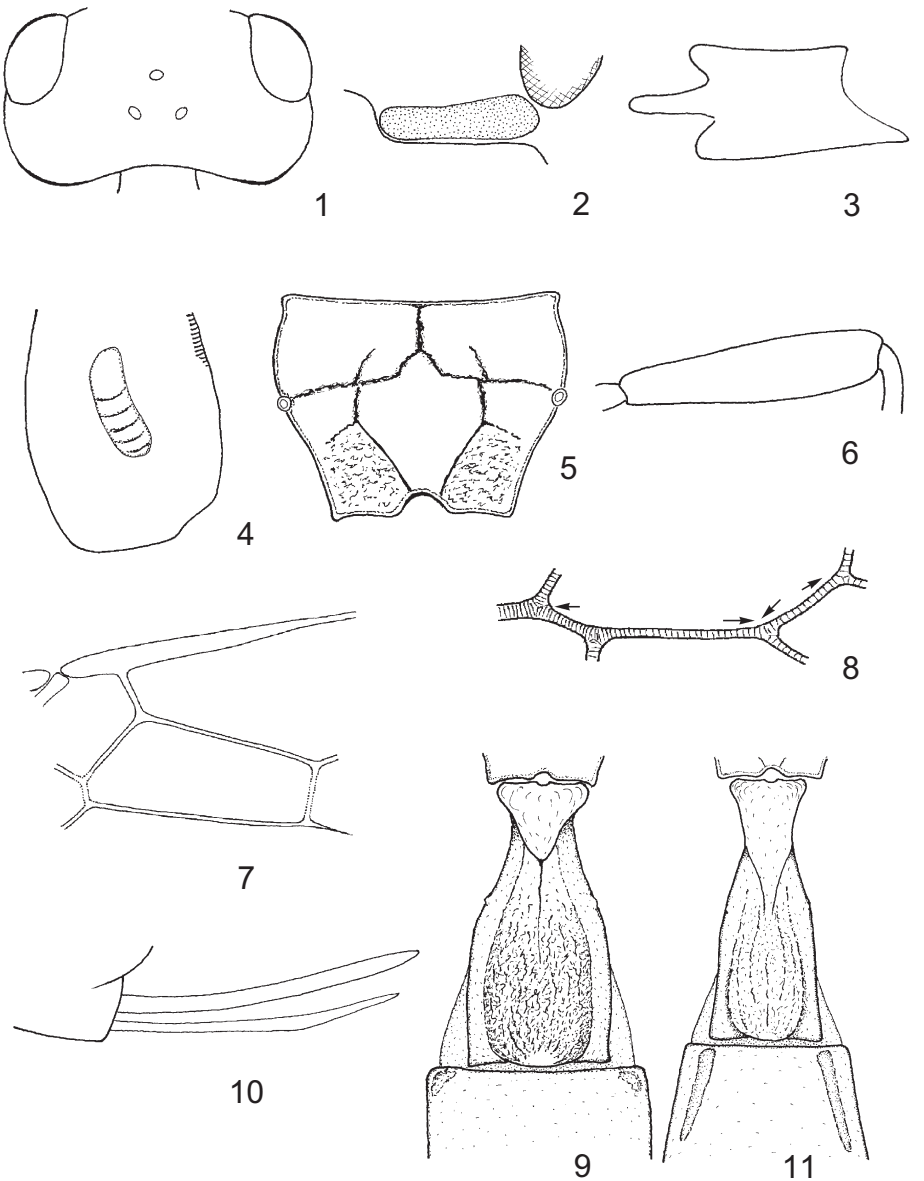
Male and host unknown.

Distribution – Hungary.

Remarks – *Aspilota digitula* sp. n. is nearest to *A. fuscicornis* (HALIDAY, 1838) and runs to this species in FISCHER's (1976: 346–357) key. The two species are separated by the following features:

1(2) Middle (or second) tooth of mandible narrow and long, i.e. digitiform (Fig. 3). Second tergite latero-basally with a pair of dimples (Fig. 9). *Areola basalis* of propodeum distinctly more broadening anteriorly (Fig. 5). Eye in dorsal view longer than temple (Fig. 1). Female: 2 mm. Hungary **A. digitula** sp. n.

2(1) Middle (or second) tooth of mandible widening basally and shorter (Fig. 12). Second tergite latero-basally with a pair of fairly long longitudinal grooves (Fig. 11). *Areola basalis* of propodeum less broadening anteriorly (Fig. 13). Eye in dorsal view as long as temple (minute deviations possible) (Fig. 14). Female, male: 1.7–2 mm. Europe, Mongolia, Korea *A. fuscicornis* (HALIDAY, 1838)

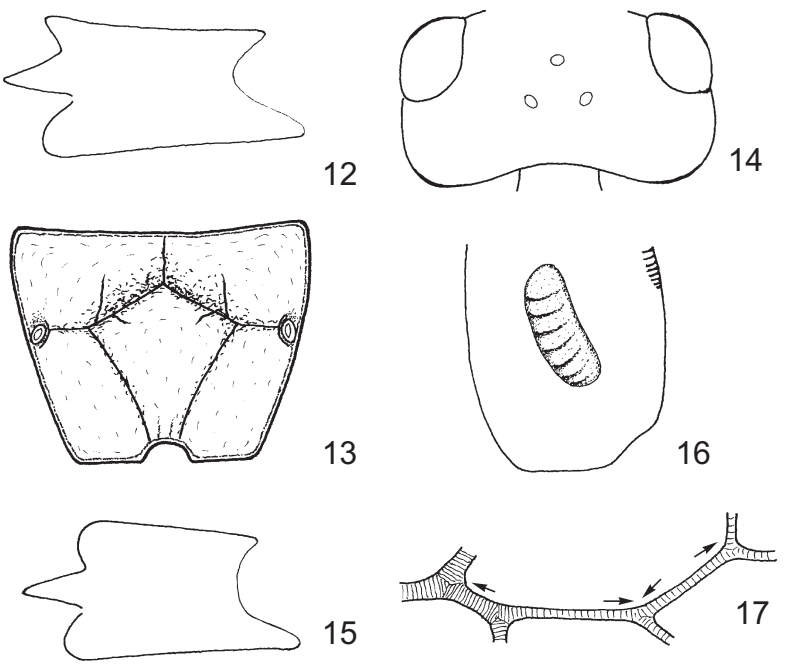


Figs 1–11. *Aspilota digitula* sp. n: 1 = head in dorsal view, 2 = right tentorial (or paraclypeal) pit, 3 = mandible, 4 = mesopleuron with precoxal suture, 5 = propodeum, 6 = hind femur, 7 = pterostigma and second submarginal cell of fore wing, 8 = vein *1–2CU(1)* of fore wing, 9 = tergites 1–2, 10 = ovipositor apparatus. – *Aspilota fuscicornis* (HALIDAY, 1838): 11 = tergites 1–2

The new species runs also to *A. iocosipectus* FISCHER, 1974. The two species are clearly distinguished by the following features:

1(2) Middle (or second) tooth of mandible narrow and long, rounded apically (Fig. 3). Precoxal suture subcrenulate (Fig. 4). Vein *1–2CU1* 2.3 times as long as *m–cu* (Fig. 8). Penultimate flagellomere 3.5 times as long as broad, antena with 18 antennomeres. Female: 2 mm. Hungary
A. digitula sp. n.

2(1) Middle (or second) tooth of mandible less narrow and shorter, apically pointed (Fig. 15). Precoxal suture distinctly crenulate (Fig. 16). Vein *1–2CU*(*1*) 1.6–1.7 times longer than *m–cu* (Fig. 17). Penultimate flagellomere 1.7–2 times as long as broad, antenna with 19–20 antennomeres. Female: 2–2.1 mm. England, Austria, Hungary, Slovakia
A. iocosipectus FISCHER, 1974



Figs 12–17. *Aspilota fuscicornis* (HALIDAY, 1838): 12 = mandible, 13 = propodeum, 14 = head in dorsal view. – *Aspilota iocosipectus* FISCHER, 1974: 15 = mandible, 16 = mesopleuron with precoxal suture, 17 = vein *1–2CU*(*1*) of fore wing

Aspilota impar sp. n.
(Figs 18–26)

Type material – Female holotype: Hungary, Budapest, Városliget, food of the host: *Agaricus subperonatus* (J. LANGE) SING., Fungi: Agaricaceae), 16 July 1970, leg. et educ. M. BABOS. – Holotype is in fairly good condition: (1) glued by mesosternum on a pointed card; (2) missing: left flagellum, right hind wing, right hind leg; (3) tarsomeres 3–5 of left fore leg glued separately. The holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 11298.

Etymology – The new species received the name "impar" (unique) owing to the truncate form of the upper tooth of its mandible (Fig. 21) unusual among the *Aspilota* species.

Description of the female holotype – Body 1.9 mm long. Antenna short, as long as head and two-thirds of mesosoma combined, with 15 antennomeres. Flagellum thick: first flagellomere twice, second flagellomere 1.57 times and penultimate flagellomere 1.5 times as long as broad (Fig. 18). – Head in dorsal view (Fig. 19) transverse, 1.8 times as broad (between temples) as long, temple somewhat swollen, i.e. head between temples somewhat broader than between eyes; temple slightly longer than eye; occiput excavated. Tentorial pit touching compound eye (*cf.* Fig. 2). Eye in lateral view 1.6 times as high as wide and 0.8 times as wide as temple (i.e. temple 1.2 times wider than eye) (Fig. 20, see arrows). Mandible almost 1.5 times as long medially as broad between upper and lower teeth; upper tooth truncate, middle tooth pointed (Fig. 21). Head polished, face and clypeus with upwards directed hairs.

Mesosoma in lateral view 1.25 times as long as high. Notaulix shallow and restricted to declivous part of mesoscutum. Mesoscutal dimple missing. Precoxal suture short, crenulate, restricted to middle of mesopleuron. Propodeum with a distinct and wide *areola basalis*, along carination rugulose, pair of spiracles fairly large (Fig. 22). Mesosoma polished. – Hind femur three times as long as broad medially (Fig. 23). Hind tarsus one-fifth longer than hind tibia; hind basitarsus as long as tarsomeres 2–3 combined.

Fore wing slightly longer than body. Pterostigma distinct, parallel-sided and eight times as long as wide, issuing *r* proximally from its middle, *r* shorter than width of pterostigma; second submarginal cell proximally widening, *3–SR* 1.6 times as long as *2–SR* (Fig. 24), *SR1* somewhat more than twice as long as *3–SR* and reaching tip of wing. Vein *1–2CU*(*1*) almost 1.8 times longer than *m–cu* (Fig. 25, see arrows).

First tergite (Fig. 26) just less than 1.5 times as long as broad behind, pair of spiracles at middle of tergite, beyond spiracles tergite broadening, pair of keels meeting near before middle of tergite, medially rather striolate, posteriorly smooth. Beyond first tergite metasoma polished. Ovipositor sheath as long as hind tarsomeres 1–2 combined.

Scape and pedicel yellow, flagellum brown to dark brown. Head and mesosoma dark brown, mandible yellow, palpi light yellow. Tegula brownish yellow. Metasoma brown to dark brown with faint rusty tint. Legs yellow. Wings hyaline, pterostigma proximally brown, distally yellow, veins brownish to almost colourless.

Male and host unknown.
Distribution – Hungary.

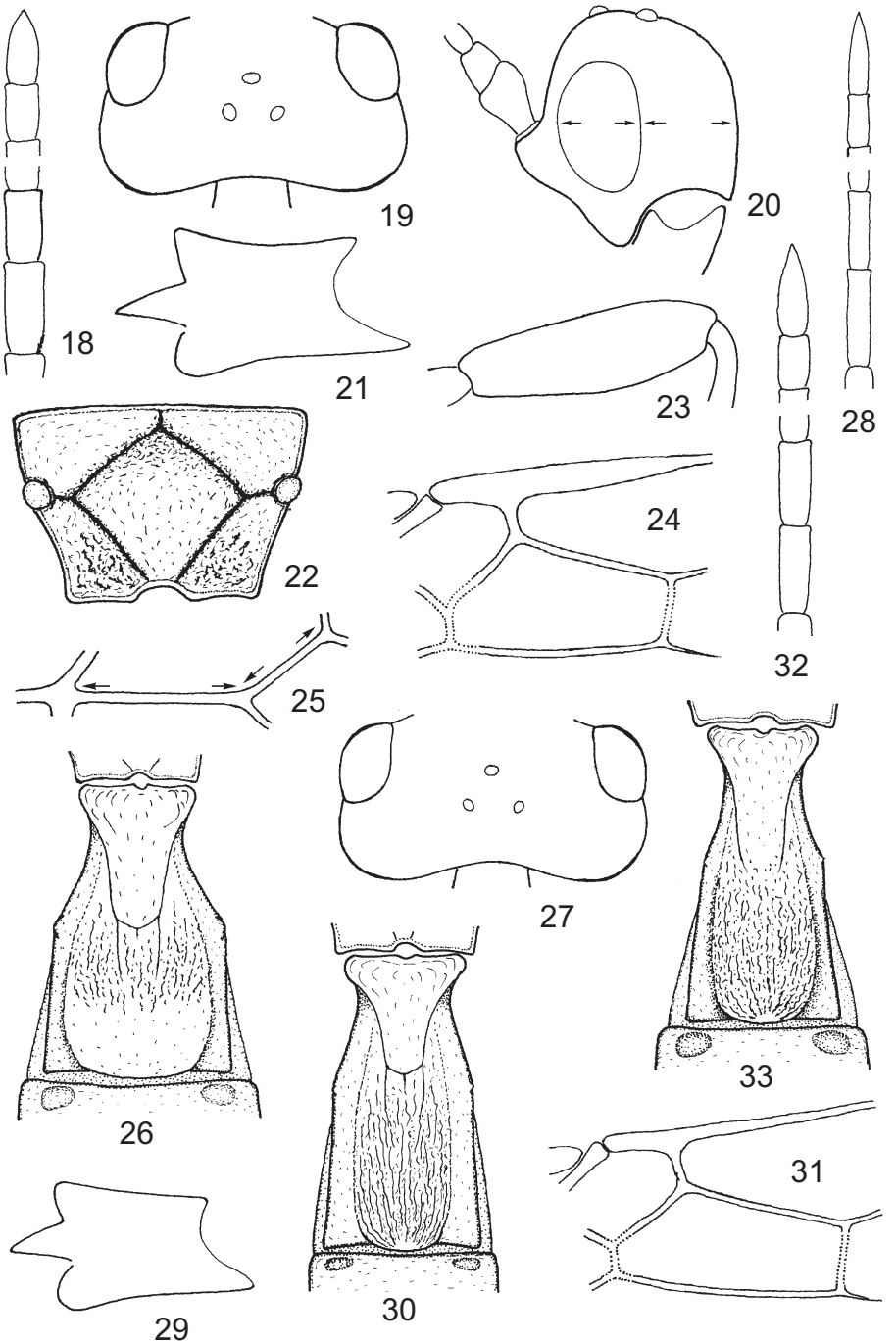
Remarks – Aspilota impar sp. n. is nearest to two species: *A. breviantennata* TOBIAS, 1962 and *A. latitemporata* FISCHER, 1976. The three species are distinguished by the following features:

1(2) Temple in dorsal view simple, i.e. head between eyes and temples equally broad (Fig. 27). Flagellomeres long: first flagellomere four times, second flagellomere three times and penultimate flagellomere twice as long as broad (Fig. 28). Upper tooth of mandible rounded (Fig. 29). First tergite 1.9–2 times as long as broad, almost parallel-sided beyond pair of spiracles (Fig. 30). Second submarginal cell of fore wing not widening proximally, *3–SR* 1.8–2 times as long as *2–SR* (Fig. 31). Legs yellow. Female: 1.6–1.8 mm. European Russia, Romania (Transylvania), Hungary, Slovakia *A. breviantennata* TOBIAS, 1962

2(1) Temple in dorsal view swollen, i.e. head between temples broader than between eyes (Fig. 19). Flagellomeres shorter (Figs 18, 32). Upper tooth of mandible rounded (Fig. 58) or truncate (Fig. 21).

3(4) Upper tooth of mandible truncate (Fig. 21). Antenna short, as long as head and two-thirds of mesosoma combined; first flagellomere twice, second flagellomere 1.57 times and penultimate flagellomere 1.5 times as long as broad (Fig. 18). First tergite just less than 1.5 times as long as broad behind, hardly broadening beyond pair of spiracles (Fig. 26). Second submarginal cell of fore wing widening proximally, *r* short (Fig. 24). Legs yellow. Female: 1.9 mm. Hungary **A. impar** sp. n.

4(3) Upper tooth of mandible rounded (Fig. 58) or somewhat pointed (*cf.* Fig. 12). Antenna as long as head, mesosoma and first tergite combined; first flagellomere 3–3.2 times, second flagellomere 2.7–2.8 times and penultimate flagellomere 1.6 times as long as broad (Fig. 32). First tergite 1.8–2 times as long as broad behind, beyond pair of spiracles broadening (Fig. 33). Second submarginal cell of fore wing not widening proximally, *r* long (Fig. 34). Legs yellow to brownish yellow. Female: 1.6–1.8 mm. Austria, Hungary, Slovakia, Romania (Transylvania) *A. latitemporata* FISCHER, 1976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Aspilota makita sp. n.
(Figs 35–46)

Type material (3 females) – Female holotype: Hungary, Pilisszántó, Hosszú-hegy, 17 August 1997, leg. J. PAPP. One female paratype: Hungary, Budapest, Hűvösvölgy, 8 August 1926, leg. L. BIRÓ. One female paratype: Romania, Transylvania, Marosvásárhely (Tîrgu Mureş), Csere-erdő, 24 August 2002, leg. Z. LÁSZLÓ. – Holotype and two paratypes are in good condition, two females (from Pilisszántó and Marosvásárhely) are glued on pointed cards. The holotype and two paratypes are deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. Nos 11301 (holotype) and 11302–11303 (paratypes).

Etymology – The species name "makita" is an arbitrary combination of letters.

Description of the female holotype – Body 2.2 mm long. Antenna about three-fourths as long as body and with 18 antennomeres. First flagellomere four times as long as broad and 1.2 times longer than second flagellomere; flagellomeres gradually shortening so that penultimate flagellomere 1.7 times as long as broad (Fig. 35). – Head in dorsal view (Fig. 36) transverse, 1.7 times as broad as long, temple swollen (i.e. head between temples somewhat broader than between eyes) and slightly longer than eye. Eye in lateral view 1.5 times as high as wide and 0.85 times as wide as temple (i.e. temple nearly 1.2 times wider than eye), temple ventrally somewhat narrowing (Fig. 37, see arrows). Mandible 1.7 times as long medially as broad between upper and lower teeth, upper tooth retracted, middle tooth clearly pointed, lower tooth rounded (Fig. 38). Tentorial pit wide and touching compound eye (Fig. 39). Head polished, face and clypeus with upwards directed hairs.

Mesosoma in lateral view 1.3 times as long as high. Notaulix restricted to anterior declivous part of mesoscutum. Mesoscutal dimple missing. Precoxal suture short, crenulate and restricted to anterior part of mesopleuron; mesopleuron posteriorly with a croissant-like and crenulate suture (Fig. 40). Propodeum with less distinct *areola basalis*, otherwise with rather irregular carination and partly rugulose, pair of spiracles small (Fig. 41). Mesosoma otherwise polished. – Hind femur 3.2 times as long as broad distally (Fig. 42). Hind tarsus a bit longer than hind tibia; hind basitarsus just shorter than tarsomeres 2–4 combined.

Figs 18–33. *Aspilota impar* sp. n.: 18 = flagellomeres 1–2 and ultimate two flagellomeres, 19 = head in dorsal view, 20 = head in lateral view, 21 = mandible, 22 = propodeum, 23 = hind femur, 24 = pterostigma and second submarginal cell of fore wing, 25 = vein *1–2CU(1)* of fore wing, 26 = first tergite. – *Aspilota breviantennata* TOBIAS, 1962: 27 = head in dorsal view, 28 = flagellomeres 1–2 and ultimate two flagellomeres, 29 = mandible, 30 = first tergite, 31 = pterostigma and second submarginal cell of fore wing. – *Aspilota latitemporata* FISCHER, 1976: 32 = flagellomeres 1–2 and ultimate two flagellomeres, 33 = first tergite

Fore wing somewhat longer than body. Pterostigma very narrow, *r* twice longer than width of pterostigma. Second submarginal cell short, *3–SR* 1.7 times as long as *2–SR* (Fig. 43), *SR1* 2.5 times as long as *3–SR*. Vein *1–2CU*(*1*) twice as long as *m–cu* (Fig. 44, see arrows).

First tergite (Fig. 45) twice as long as broad behind, pair of spiracles at middle of tergite, beyond spiracles tergite slightly broadening; pair of keels meeting before middle of tergite, hind part of tergite striolate. Second tergite one-fifth longer than third tergite. Beyond first tergite metasoma polished. Ovipositor sheath somewhat upcurved and as long as hind tarsomeres 1–3 combined.

Scape and pedicel pale yellow, flagellum light brown. Head brown, palpi (and oral organs) whitish. Mesosoma dark brown; pronotum, mesoscutum and scutellum brown. Metasoma anteriorly brownish yellow, posteriorly light brown. Legs pale yellow. Wings hyaline, pterostigma and veins brownish yellow.

Male and host unknown.

Variable features of the two female paratypes – Similar to the female holotype. 1) Paratype from Budapest: body 2.2 mm long. Antenna with 17 antennomeres. First flagellomere 1.25 times longer than second flagellomere. Hind femur 3.8 times as long as broad distally (Fig. 46). *Areola basalis* of propodeum somewhat more distinct. Distal two-thirds of fore wing venation less visible owing to its less coloured sclerotes. Head and mesosoma dark brown, metasoma light brown to brown. – 2) Paratype from Marosvásárhely: body 2.3 mm long. Antenna with 19 antennomere. Hind femur slightly more broadening distally, i.e. 3.2 times as long as broad distally (Fig. 42). *Areola basalis* of propodeum somewhat more distinct. Second submarginal cell fairly long, *3–SR* 1.9 times as long as *2–SR*. Striation of first tergite somewhat stronger. Head and mesosoma dark brown, tergites 1–2 light brown, rest of metasoma brown.

Distribution – Hungary, Romania (Transylvania).

Remarks – Aspilota makita sp. n. is nearest to *A. imparidens* FISCHER, l974 and *A. nervulata* FISCHER, 1974. The three species are differentiated by the following features:

1(2) Temple in dorsal view slightly longer than eye, head in dorsal view 1.7 times as broad as long (Fig. 36). Upper tooth of mandible retracted, middle tooth clearly pointed (Fig. 38). Penultimate flagellomere 1.5–1.7 times as long as broad (Fig. 35). Precoxal suture short, i.e. restricted to anterior part of mesopleuron (Fig. 40). Legs pale yellow. Female: 2.2–2.3 mm. Hungary, Romania **A. makita** sp. n.

2(1) Temple in dorsal view as long as eye, head in dorsal view 1.7–1.9 times as broad as long (Figs 50, 53). Upper tooth of mandible at most just retracted, middle tooth less pointed (Figs 47, 51). Penultimate flagellomere twice as long as broad (Figs 49, 52). Legs yellow.

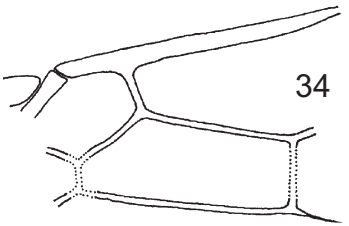
3(4) Upper tooth of mandible just retracted, middle tooth less pointed (Fig. 47). Precoxal suture reaching fore margin of mesopleuron (Fig. 48). First flagellomere just longer than second flagellomere (Fig. 49), flagellum slightly less attenuating. Head in dorsal view 1.9 times as broad as long (Fig. 50). Metasoma anteriorly rusty brown, posteriorly blackish to black. Female: 2–2.2 mm. Austria, Hungary
A. imparidens FISCHER, 1974

4(3) Upper tooth of mandible not retracted as usually, middle tooth rather blunt (Fig. 51). Precoxal suture short, restricted to middle of mesopleuron. First flagellomere 1.2 times as long as broad (Fig. 52), flagellum slightly more attenuating. Head in dorsal view 1.75–1.8 times as broad as long (Fig. 53). Metasoma chestnut brown. Female: 1.9–2.1 mm. Germany, Hungary *A. nervulata* FISCHER, 1974

The new species is related to *A. deserta* PAPP, 1967 by the form of the head in dorsal view, form of mandible, sculpture of propodeum and size of the first tergite. However, the two species are distinct by the features as follows:

1(2) Temple in lateral view 1.6 times wider than eye (Fig. 54). Mandible just 1.5 times longer than broad between upper and lower teeth; upper tooth slightly more retracted and middle tooth less pointed (Fig. 55). Vein *1–2CU*(*1*) 1.35 times as long as *m–cu* (Fig. 56, see arrows). Hind femur 3.6 times as long as broad just distally (Fig. 57). Legs yellow. Male: 2.8 mm. Mongolia *A. deserta* PAPP, 1967

2(1) Temple in lateral view nearly 1.2 times wider than eye (Fig. 37). Mandible 1.7 times longer than broad between upper and lower teeth; upper tooth slightly less retracted and middle tooth more pointed (Fig. 38). Vein *1–2CU*(*1*) twice as long as *m–cu* (Fig. 44, see arrows). Hind femur 3.3–3.8 times as long as broad distally (Figs 42, 46). Legs pale yellow. Female: 2.2–2.3 mm. Hungary, Romania **A. makita** sp. n.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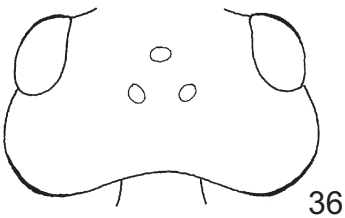
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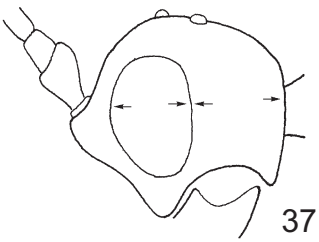
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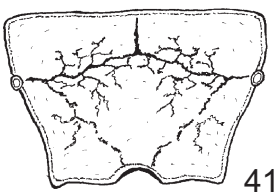
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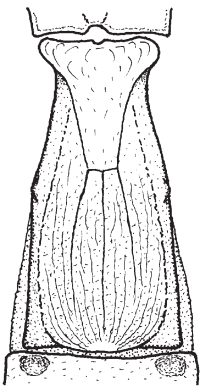
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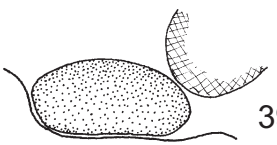
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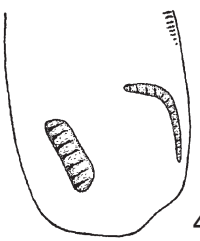
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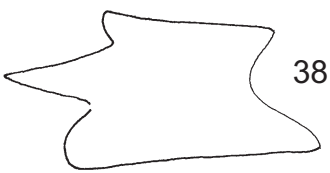
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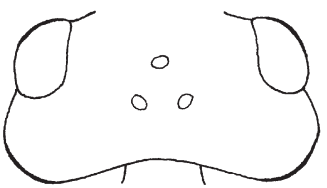
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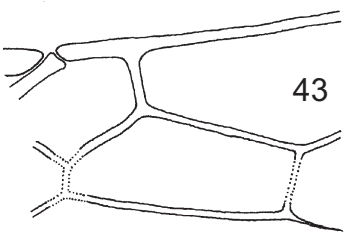
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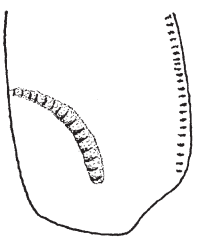
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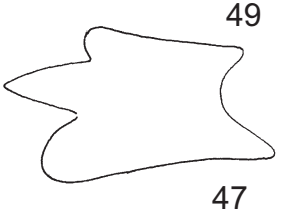
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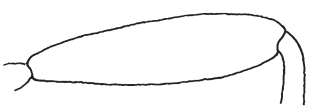
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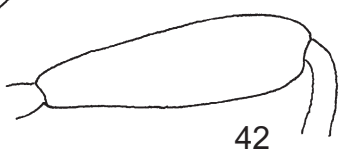
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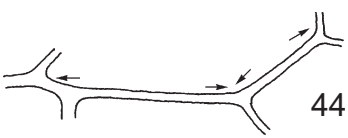
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Aspilota oroszi sp. n.
(Figs 59–68)

Material examined – Female holotype: Asiatic Russia, Mts West Altai, valley of River Charysh, Sentelek, 800 m a.s.l., 21–23 July 1993, leg. A. OROSZ. – Holotype is in good condition: (1) glued on a pointed card; (2) distal half of fore wings somewhat creased. The holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 11299.

Etymology – The new species is dedicated to its collector and my good colleague, Mr. ANDRÁS OROSZ, specialist of Homoptera in the Hungarian Natural History Museum, Budapest.

Description of the female holotype – Body 2.8 mm long. Antenna as long as body and with 20 antennomeres. First flagellomere almost 2.8 times, second flagellomere almost 1.9 times and penultimate flagellomere nearly 1.9 times as long as broad (Fig. 59). – Head in dorsal view (Fig. 60) transverse, almost 1.9 times as broad as long, eye 1.65 times longer than temple, temple not swollen (i.e. head between temples and eyes equal in breadth), occiput weakly excavated. Tentorial pit wide and touching compound eye (Fig. 61). Eye in lateral view almost 1.6 times as high as wide and 1.45 times wider than temple, temple ventrally slightly narrowing (Fig. 62). Mandible 1.7 times longer medially than high between upper and lower teeth, distally not broadening; upper tooth small and rounded (Fig. 63). Head polished, face and clypeus with somewhat upwards directed hairs.

Mesosoma in lateral view stout, somewhat longer than high. Notaulix short and restricted to anterior declivous part of mesoscutum. Mesoscutum with dimple. Precoxal suture short, finely crenulate, restricted to middle of mesopleuron. Propodeum polished and with a medio-longitudinal carina, along it finely rugulose, pair of spiracles distinct (Fig. 64). – Hind femur 4.1 times as long as broad distally (Fig. 65). Hind tibia and tarsus of equal length; hind basitarsus as long as tarsomeres 2–3 and half of tarsomere 4 combined.

Figs 34–50. *Aspilota latitemporata* FISCHER, 1976: 34 = pterostigma and second submarginal cell of fore wing. – *Aspilota makita* sp. n.: 35 = flagellomeres 1–2 and ultimate two flagellomeres, 36 = head in dorsal view, 37 = head in lateral view, 38 = mandible, 39 = right tentorial (or paraclypeal) pit, 40 = mesopleuron with precoxal suture, 41 = propodeum, 42 = hind femur of holotype, 43 = pterostigma and second submarginal cell of fore wing, 44 = vein *1–2CU*(*1*) of fore wing, 45 = first tergite, 46 = hind femur of paratype. – *Aspilota imparidens* FISCHER, 1974: 47 = mandible, 48 = mesopleuron with precoxal suture, 49 = flagellomeres 1–2 and ultimate two flagellomeres, 50 = head in dorsal view

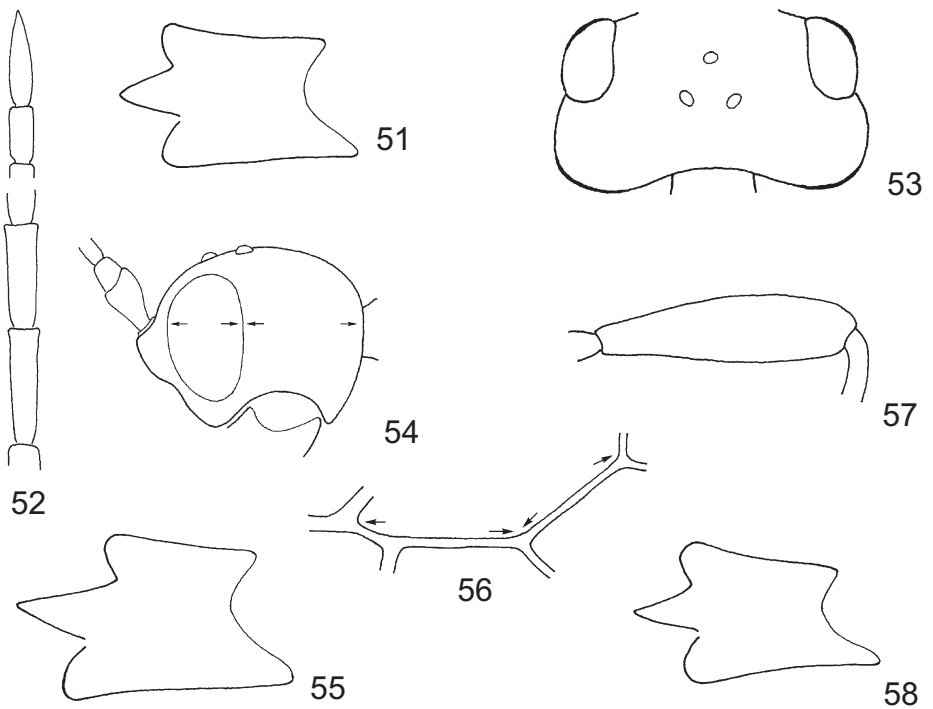
Fore wing one-sixth longer than body. Pterostigma distinct, narrow and parallel-sided, issuing *r* clearly proximally from its middle; *r* clearly twice longer than width of pterostigma. Second submarginl cell long, *3–SR* 2.7 times as long as *2–SR* (Fig. 66), *SR1* more than twice as long as *3–SR*, slightly bent and reaching tip of wing. Vein *1–2CU(1)* distinctly twice longer than *m–cu*, two veins hardly meeting angularly (Fig. 67, see arrows).

First tergite (Fig. 68) 1.3 times longer than broad behind, gradually broadening posteriorly, pair of spiracles at middle of tergite, pair of keels just reaching hind half of tergite, posterior half of tergite longitudinally rugulose. Further tergites polished. Ovipositor sheath slightly longer than first tergite or as long as hind tarsomeres 1–2 combined.

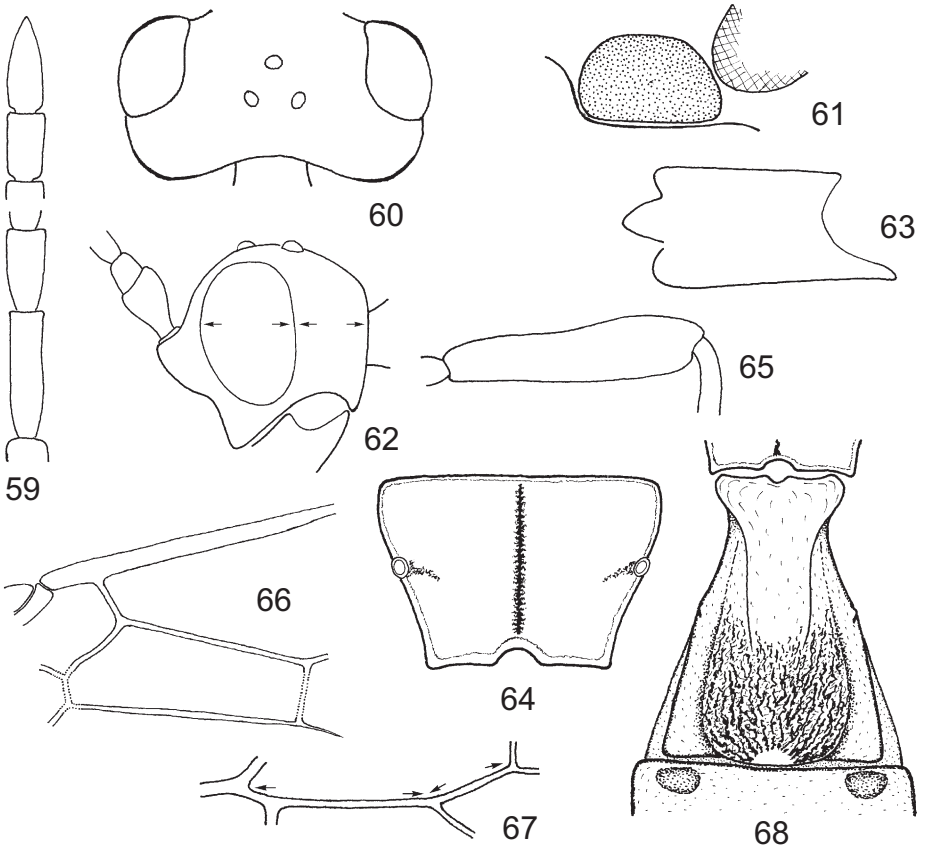
Body blackish. Scape and pedicel yellow, flagellum darkening brown. Mandible yellow, palpi pale yellow; tegula brownish, parategula yellow. Tergites 1–2 and sternites 1–2 with faint rusty to light brownish suffusion. Legs yellow. Wings hyaline, pterostigma and veins greyish-brownish.

Male and host unknown.

Distribution – Asiatic Russia (Altai Mts).



Figs 51–58. *Aspilota nervulata* FISCHER, 1974: 51 = mandible, 52 = flagellomeres 1–2 and ultimate two flagellomeres, 53 = head in dorsal view. – *Aspilota deserta* PAPP, 1967: 54 = head in lateral view, 55 = mandible, 56 = vein *1–2CU(1)* of fore wing, 57 = hind femur. – *Aspilota latitemporata* FISCHER, 1976: 58 = mandible



Figs 59–68. *Aspilota oroszi* sp. n.: 59 = flagellomeres 1–2 and ultimate two flagellomeres, 60 = head in dorsal view, 61 = right tentorial (or paraclypeal) pit, 62 = head in lateral view, 63 = mandible, 64 = propodeum, 65 = hind femur, 66 = pterostigma and second submarginal cell of fore wing, 67 = vein *1–2CU*(*1*) of fore wing, 68 = firs tergite

Remarks – Aspilota oroszi sp. n. is the first species discovered in the Palaearctic Region of the "Sektion B" of the *Aspilota* species (FISCHER 1969: 362, 1976: 345), the species assigned to this section were known only in the Nearctic Region so far; the separating features of this section are the following: 1) mesoscutum with dimple, 2) tentorial pit touching compound eye (Fig. 61).

Aspilota oroszi sp. n. is nearest to *A. insularis* FISCHER, 1969 as their tentorial pit touching compound eye, the long second submarginal cell and the length of the ovipositor sheath is similar; the two species are distinguished by a few features keyed:

1(2) Mandible broadening distally, its upper tooth large (Abb. 3 in FISCHER 1969: 364). Tentorial pit narrow. Temple slightly swollen, i.e. head in dorsal view between temples somewhat broader than betwen eyes, head 1.7 times as broad as long. First flagellomere five times as long as broad (Abb. 2 in FISCHER 1969: 364). First tergite 1.7 times as long as broad behind, its surface smooth. Carina of propodeum with short transverse keel. Body brown, legs brownish. Female: 2.5 mm. Canada
A. insularis FISCHER, 1969

2(1) Mandible not broadening distally, its upper tooth small (Fig. 63). Tentorial pit wide (Fig. 61). Temple not swollen, i.e. head in dorsal view between temples as broad as between eyes, head almost 1.9 times as broad as long (Fig. 60). First flagellomere almost 2.8 times as long as broad (Fig. 59). First tergite 1.3 times as long as broad, beyond pair of spiracles longitudinally rugo-rugulose (Fig. 68). Carina of propodeum without transverse keel (Fig. 64). Body blackish, legs yellow. Female: 2.8 mm. Asiatic Russia (Altai Mts) **A. oroszi** sp. n.

Aspilota pitralon sp. n.
(Figs 69–75)

Type material – Female holotype: Spain, Malaga, Torremolinos, 7 May 1978, leg. E. BOHART. – Holotype is in good condition: (1) glued by its right side to the pin itself, (2) wings medio-transversely bent. The holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 11300.

Etymology – "Pitralon" is a phantasy name.

Description of the female holotype – Body 2 mm long. Antenna one-fifth shorter than body, with 18 antennomeres. First flagellomere 3.3 times and penultimate flagellomere 1.75 times as long as broad. – Head in dorsal view (Fig. 69) transverse, less than 1.7 times as broad as long, temple not swollen and 1.25 times longer than eye, occiput excavated. Tentorial pit touching compound eye. Eye in lateral view 1.4 times as high as wide, temple

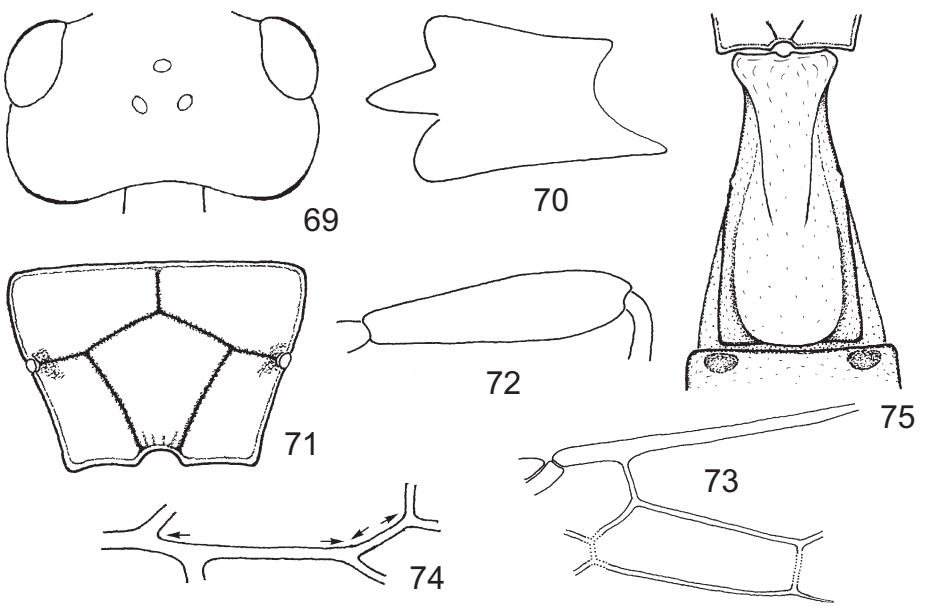
just wider than eye and ventrally narrowing. Mandible 1.4 times as long medially as broad between upper and lower teeth, distally broadening, upper tooth rounded, middle tooth pointed, lower tooth fairly large (Fig. 70). Head polished, face and clypeus with upwards directed hairs.

Mesosoma in lateral view 1.2 times as long as high. Notaulix very short and less distinct, restricted to declivous part of mesoscutum. Mesoscutum without dimple. Precoxal suture narrow, subcrenulate, restricted to middle of mesopleuron. Propodeum carinated, *areola basalis* distinct, close along carinae rugulose-subrugulose, pair of spiracles small (Fig. 71). – Hind femur 3.6 times as long as broad and clearly broadening distally (Fig. 72). Hind tibia and tarsus of equal length; hind basitarsus as long as tarsomeres 2–3 combined.

Fore wing somewhat longer than body. Pterostigma hardly distinct and issuing *r* proximally from its middle; *r* twice as long as width of pterostigma; second submarginal cell fairly long, *3–SR* 2.7 times as long as *2–SR* (Fig. 73), *SR1* weakly bent and somewhat thick, reaching tip of wing. Vein *1–2CU*(*1*) 3.5 times longer than *m–cu* (Fig. 74, see arrows).

First tergite (Fig. 75) twice longer than broad behind, evenly broadening posteriorly, pair of spiracles before middle of tergite, pair of basal keels ending medially, hind half of tergite smooth. Further tergites polished. Ovipositor sheath somewhat longer than first tergite or as long as hind tarsomeres 1–2 combined.

Body dark brown. Scape and pedicel brownish, flagellum darkening brown to dark brown. Mandible, palpi and tegula yellow. Metasoma posteriorly with blackish suffusion.



Figs 69–75. *Aspilota pitralon* sp. n.: 69 = head in dorsal view, 70 = mandible, 71 = propodeum, 72 = hind femur, 73 = pterostigma and second submarginal cell of fore wing, 74 = vein *1–2CU*(*1*) of fore wing, 75 = first tergite

Legs yellow, hind coxa and hind tibia apically brownish. Wings hyaline, pterostigma and veins brownish.

Male and host unknown.

Distribution – Spain.

Remarks – *Aspilota pitralon* sp. n. is nearest to two species, *A. daemon* STELFOX et GRAHAM, 1948 (FISCHER 1972: 364–366) and *A. pauciarticulata* FISCHER, 1976 in FISCHER's key (1976: 353–357) to the species of the *lobidens*-group; the three species are distinguished by the following features:

1(2) Head cubic in dorsal view (Fig. 76), 1.5 times as broad as long, temple swollen, a bit longer than eye. Mandible slightly broadening distally, upper tooth small and middle tooth clearly widening basally (Fig. 77). Propodeum along transverse carina widely rugulose-subrugulose, *areola basalis* less distinct (Fig. 78). *3–SR* 2–2.1 times as long as *2–SR* (Fig. 79). Female: 1.8–2.1 mm. Ireland, Hungary

A. daemon STELFOX et GRAHAM, 1948

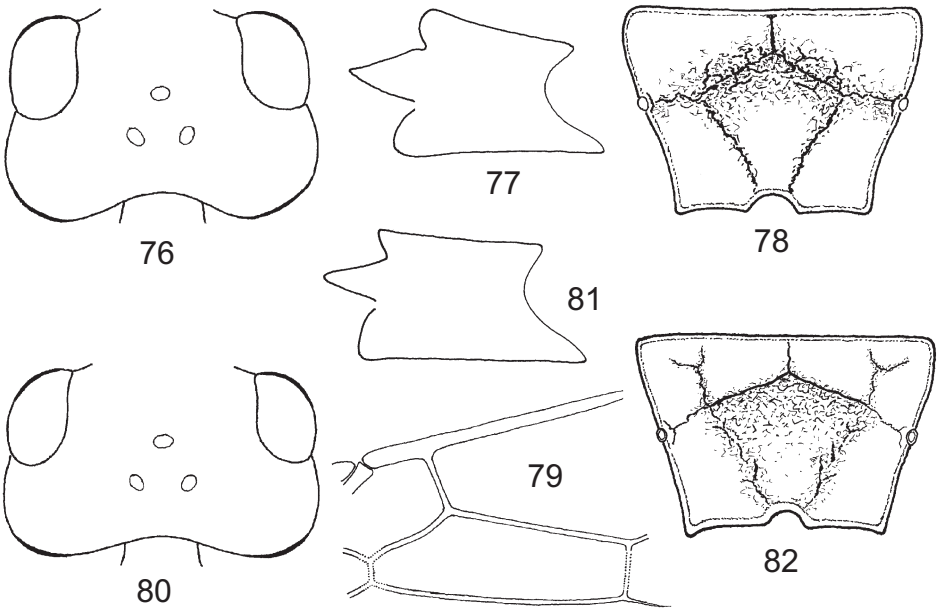
2(1) Head transverse in dorsal view, 1.7 times as broad as long (Figs 69, 80). Mandible either broadening distally (Fig. 70) or not broadening (Fig. 81). Propodeum other than in *A. daemon* (Figs 71, 82).

3(4) Propodeum anteriorly with a transverse carina, before smooth, behind rugulose (Fig. 82). Mandible not broadening distally, its upper tooth small and pointed (Fig. 81). Antenna with 13 antennomeres. Precoxal suture reaching fore margin of mesopleuron. *3–SR* 1.7 times as long as *2–SR*, *SR1* not thick. Female: 1.4–1.6 mm. Austria

A. pauciarticulata FISCHER, 1976

4(3) Propodeum with a distinct *areola basalis*, rugulose along carination, otherwise polished (Fig. 71). Mandible broadening distally, its upper tooth rounded (Fig. 70). Antenna with 18 antennomeres. Precoxal suture restricted to middle of mesopleuron. Vein *3–SR* 2.7 times as long as *2–SR* (Fig. 73), *SR1* slightly thick. Female: 2 mm. Spain

A. pitralon sp. n.



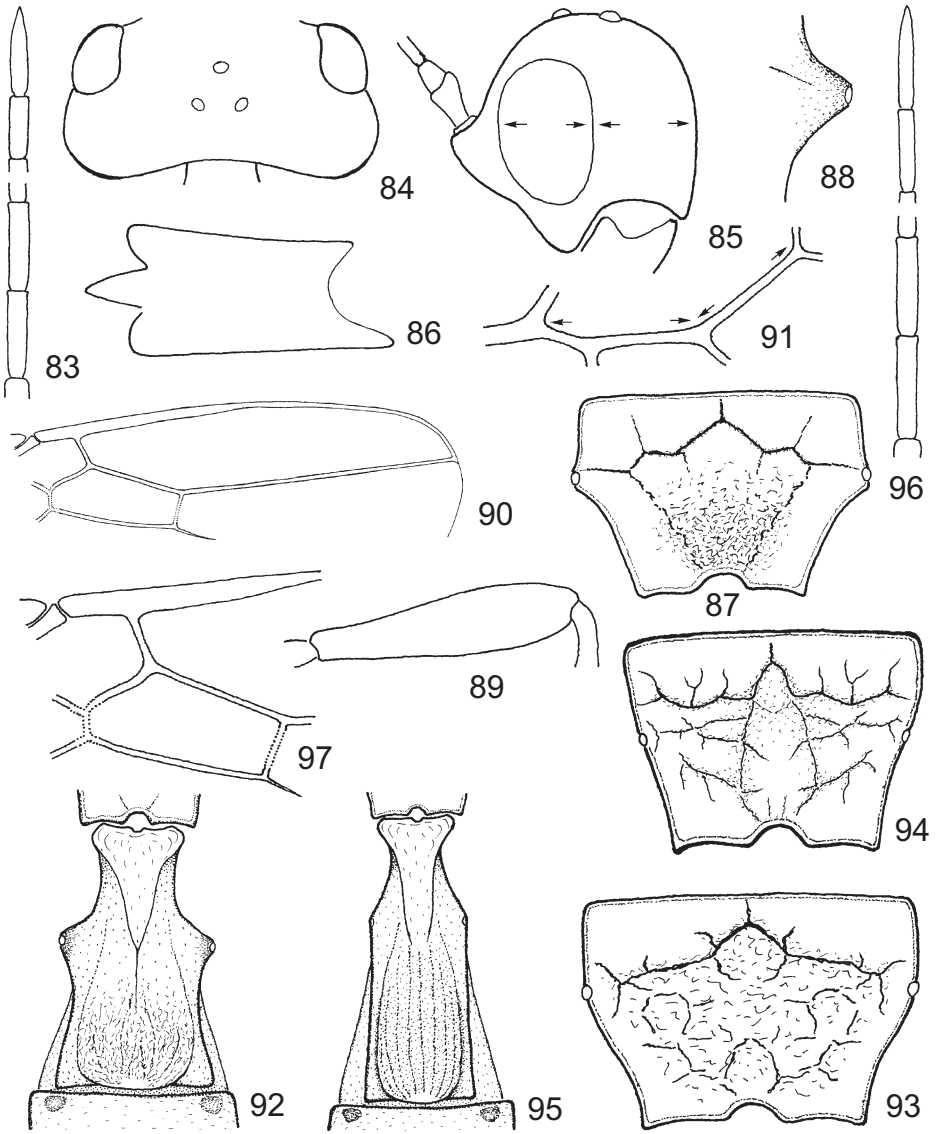
Figs 76–82. *Aspilota daemon* STELFOX et GRAHAM, 1948: 76 = head in dorsal view, 77 = mandible, 78 = propodeum, 79 = pterostigma and second submarginal cell of fore wing. – *Aspilota pauciarticulata* FISCHER, 1976: 80 = head in dorsal view, 81 = mandible, 82 = propodeum

Aspilota tuberula sp. n.
(Figs 83–92)

Type material – Male holotype: Hungary, Ugod, Somberek, Hubertlak környéke (= environs), 26–29 June 1967, leg. J. PAPP. – Holotype is in good condition: glued on a pointed card by its mesosternum and coxae 2–3. The holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 11304.

Etymology – The species name "tuberula" refers to the tuberculiform protuberance of propodeum and first tergite (Figs 87, 88).

Description of the male holotype – Body 1.3 mm long. Antenna just longer than body and with 16 antennomeres. Flagellomeres thin, first and second flagellomeres 4.6 times and penultimate flagellomere four times as long as broad (Fig. 83). – Head in dorsal view (Fig. 84) transverse, twice as broad as long, temple swollen (i.e. head betwen temples broader than between eyes) and just longer than eye. Tentorial pit touching compound eye.



Figs 83–97. *Aspilota tuberula* sp. n.: 83 = flagellomeres 1–2 and ultimate two flagellomeres, 84 = head in dorsal view, 85 = head in lateral view, 86 = mandible, 87 = propodeum, 88 = tubercle of propodeum in lateral view, 89 = hind femur, 90 = distal part of right fore wing, 91 = vein *1–2CU(1)* of fore wing, 92 = first tergite. – *Aspilota latitemporata* FISCHER, 1976: 93 = propodeum. – *Aspilota extremicornis* FISCHER, 1976: 94 = propodeum, 95 = first tergite, 96 = flagellomeres 1–2 and ultimate two flagellomeres, 97 = pterostigma and second submarginal cell of fore wing

Eye in lateral view almost 1.5 times as high as wide and nearly 0.9 times as wide as temple (i.e. temple somewhat wider than eye), temple beyond eye evenly broad (Fig. 85, see arrows). Mandible twice as long medially as broad between upper and lower teeth, middle tooth pointed (Fig. 86). Head polished, face and clypeus with upwards directed hairs.

Mesosoma in lateral view 1.4 times as long as high. Notaulix short, distinct on declivous part of mesoscutum. Mesoscutal dimple missing. Precoxal suture short, fairly wide and subcrenulate, restricted to middle of mesopleuron. Propodeum with weakly distinct areolation, its upper (or horizontal) part smooth and its declivous (or vertical) part rugulose (Fig. 87), pair of spiracles on tuberculiform protuberance (Fig. 88). – Hind femur four times as long as broad distally (Fig. 89). Hind tibia and tarsus equal in length; hind basitarsus as long as tarsomeres 2–4 combined.

Fore wing somewhat shorter than body. Pterostigma indistinct, *r* twice wider than width of pterostigma; second submarginal cell narrowing distally, *3–SR* 2.1 times as long as *2–SR*, *SR1* straight, three times as long as *3–SR* and reaching tip of wing (Fig. 90). Vein *1–2CU(1)* 1.3 times as long as *m–cu* (Fig. 91, see arrows).

First tergite (Fig. 92) less than 1.7 times as long as broad behind, pair of spiracles just before middle of tergite and situated on tuberculiform protruberance; pair of basal keels meeting anteriorly and issuing a weak median keel reaching hind half of tergite; tergite posteriorly substriolate-subrugulose. Further tergites polished.

Ground colour body dark brown. Scape and pedicel yellow, flagellum brown. Mandible yellow, palpi light yellow. Tegula brown, parategula yellow. First tergite yellow, second and third tergites brown. Legs yellow. Wings hyaline, pterostigma and veins yellowish.

Female and host unknown.

Distribution – Hungary.

Remarks – Aspilota tuberula sp. n. runs to *A. extremicornis* FISCHER, 1976 and *A. latitemporata* FISCHER, 1976 in FISCHER's (1976: 354–357) key to the *lobidens*-group. The males of the three species are separated by the following characters:

1(2) Flagellomeres short, first flagellomere 3–3.2 times, second flagellomere 2.7–2.8 times and penultimate flagellomere 1.6 times as long as broad (*cf.* Fig. 32). Propodeum rugo-rugulose, its areolation indistinct (Fig. 93). *3–SR* 1.8 times as long as *2–SR* (*cf.* Fig. 34). Temple 1.2 times longer than eye. Spiracles of propodeum and first tergite normal. First tergite 1.8–2 times as long as broad behind. Male: 1.6–1.8 mm. Austria, Hungary, Slovakia, Romania, Spain *A. latitemporata* FISCHER, 1976

2(1) Flagellomeres long, first and second flagellomeres 4–5 times and penultimate flagellomere 3–3.5 times as long as broad (Figs 83, 96). Propodeum with more or less distinct areolation (Figs 87, 94). *3–SR* either 1.6–1.7 or 2.1 times as long as *2–SR* (Figs 90, 97).

3(4) Pair of spiracles of propodeum and first tergite situated on tuberculiform protuberance (Figs 87, 88). Areolation of propodeum less distinct, partly rugulose and partly smooth (Fig. 87). First tergite less than 1.7 times as long as broad behind (Fig. 92). Flagellomeres 1–2 thin, 4.5–4.6 times longer than broad (Fig. 83). Fore wing: second marginal cell long, *3–SR* 2.1 times as long as *2–SR* (Fig. 90). Male: 1.3 mm. Hungary
A. tuberula sp. n.

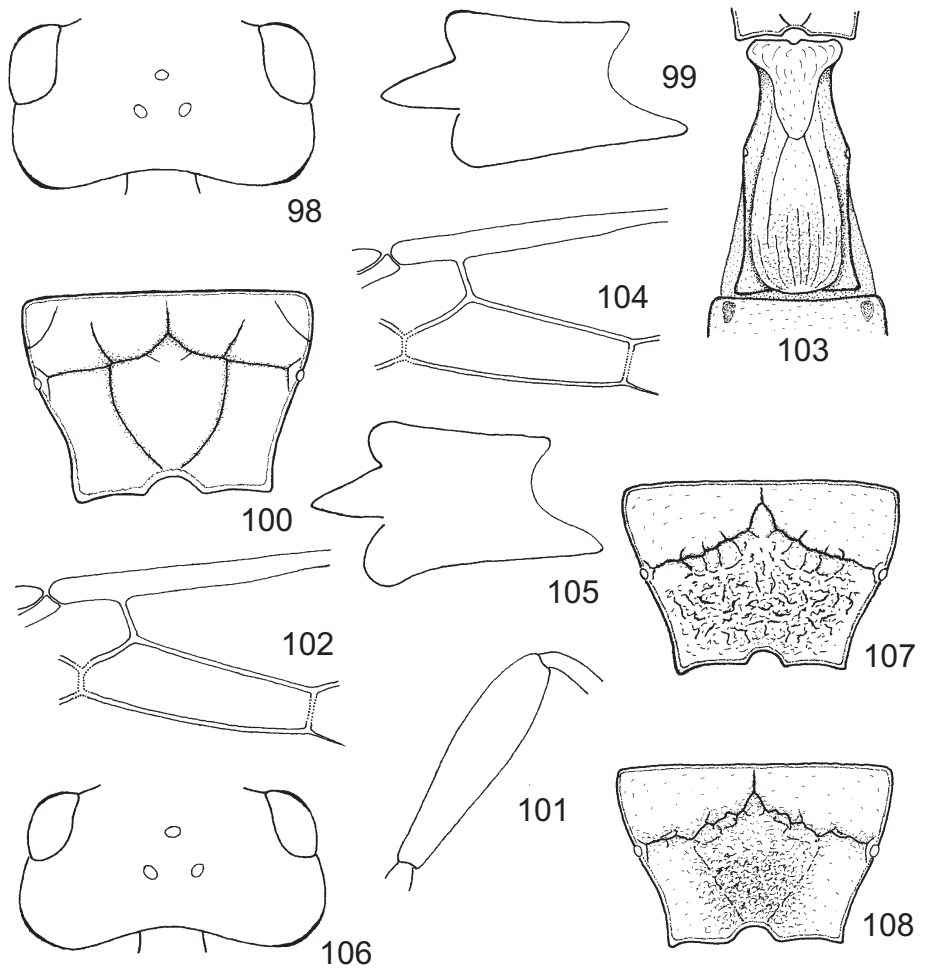
4(3) Pair of spiracles of propodeum and first tergite of usual size, i.e. not on tuberculiform protuberance, areolation of propodeum a bit more distinct, smooth to less rugulose (Fig. 94). First tergite 2.2–2.5 times as long as broad (Fig. 95). Flagellomeres 1–2 thick, five times longer than broad (Fig. 96). Fore wing: second submarginal cell short, *3–SR* 1.6–1.7 times as long as *2–SR* (Fig. 97). Male: 1.7–1.9 mm. Austria, Hungary
A. extremicornis FISCHER, 1976.

Aspilota vodara sp. n.
(Figs 98–103)

Type material – Female holotype: Hungary, Budapest, Hárshegy (=Mt Hárs), 9 June 1971, leg J. PAPP. – Holotype is in good condition: (1) glued on a pointed card by mesosternum + coxae 2–3, (2) tarsomeres 2–5 of right hind leg missing. The holotype is deposited in the Hungarian Natural History Museum (Departyment of Zoology), Budapest, Hym. Typ. No. 11305.

Etymology – "Vodara" is a phantasy name.

Description of the female holotype – Body 1.6 mm long. Antenna somewhat shorter than body and with 14 antennomeres. First flagellomere 3.5 and penultimate flagellomere 2.2 times as long as broad. – Head in dorsal view (Fig. 98) transverse, 1.8 times as broad as long, temple rounded (i.e. not swollen) and as long as eye. Tentorial pit touching compound eye. Eye in lateral view 1.5 times as high as wide, temple 1.2 times wider than eye. Mandible 1.65 times longer medially than broad between upper and lower teeth, distally somewhat broadening, lower tooth rounded, middle tooth pointed (Fig. 99). Head polished, face and clypeus with upwards directed hairs.



Figs 98–108. *Aspilota vodara* sp. n.: 98 = head in dorsal view, 99 = mandible, 100 = propodeum, 101 = hind femur, 102 = pterostigma and second submarginal cell of fore wing, 103 = first tergite. – *Aspilota minima* (THOMSON, 1895): 104 = pterostigma and second submarginal cell of fore wing, 105 = mandible, 106 = head in dorsal view, 107 = propodeum. – *Aspilota breviantennata* TOBIAS, 1962: 108 = propodeum

Mesosoma in lateral view 1.25 times as long as high. Notaulix weak, short, restricted to declivous part of mesoscutum. Mesoscutal dimple missing. Precoxal suture short, subcrenulate, restricted to middle of mesopleuron. Propodeum carinated, areola basalis fairly wide, pair of spiracles small (Fig. 100). – Hind femur 4.2 times as long as broad just

distally (Fig. 101). Hind tibia and tarsus equal in length; hind basitarsus almost as long as tarsomeres 2–4 combined.

Fore wing one-fourth longer than body. Pterostigma distinct, 7.5 times as long as wide, *r* 1.5 times longer than width of pterostigma; second submarginal cell long, *3–SR* three times as long as *2–SR*, distally narrowing (Fig. 102), *SR1* somewhat more than twice as long as *3–SR* and reaching tip of wing. Vein *1–2CU(1)* twice as long as *m–cu*.

First tergite twice as long as broad behind, pair of spiracles just before middle of tergite, beyond spiracles tergite parallel-sided, pair of keels reaching hind half of tergite; hind part of tergite (between keels) with a few longitudinal striolae. Further tergites polished. Ovipositor sheath as long as hind tarsomeres 1–2 combined.

Ground colour of body brown. Scape and pedicel yellow, flagellum darkening brown. Mandible yellow, palpi straw yellow. Tegula brownish, parategula yellow. Metasoma behind darkening brown to blackish. Legs yellow. Wings hyaline, pterostigma and veins greyish brownish.

Male and host unknown.

Distribution – Hungary.

Remarks – Aspilota vodara sp. n. runs to the species *A. minima* (THOMSON, 1895) and *A. breviantennata* TOBIAS, 1962. With the help of FISCHER's (1976: 353–357) key to the *lobidens*-group as well as considering their descriptions (FISCHER 1972: 340, 415; TOBIAS 1962: 100); the three species are separated by the characters keyed:

1(2) Fore wing: *3–SR* 2–2.2 times longer than *2–SR* (Fig. 104). Lower tooth of mandible rounded somewhat outwards directed (Fig. 105). Temple in dorsal view slightly swollen (Fig. 106). Propodeum rugo-rugulose (Fig. 107). First tergite 1.6–1.7 times as long as broad behind (cf. Fig. 30). Female: 1.3–1.5 mm. Sweden, Hungary
A. minima (THOMSON, 1895)

2(1) Fore wing: *3–SR* either 1.8(–1.9) times (Fig. 31) or three times (Fig. 102) longer than *2–SR*. Lower tooth of mandible rounded as usually (Fig. 29, 99).

3(4) Head in dorsal view twice as broad as long, temple more rounded (Fig. 27). Fore wing: *3–SR* 1.8(–1.9) times longer than *2–SR* (Fig. 31). Propodeum rugo-rugulose (Fig. 108). First tergite 1.6–1.7 times as long as broad behind, posteriorly slightly broadening (Fig. 30). Female: 1.7–2 mm. European Russia, Hungary, Romania (Transylvania), Slovakia *A. breviantennata* TOBIAS, 1962

4(3) Head in dorsal view 1.8 times as broad as long, temple less rounded (Fig. 98). Fore wing: *3–SR* three times longer than *2–SR* (Fig. 102). Propodeum smooth, areolated (Fig. 100). First tergite twice as long as broad behind, posteriorly parallel-sided (Fig. 103). Female: 1.6 mm. Hungary **A. vodara** sp. n.

*

Acknowledgments – My grateful thanks are due to Dr. M. FISCHER (Naturhistorisches Museum, Wien) who was kind enough to borrow the type-specimens of several *Aspilota* species described by him and housed in the Museum Vienna.

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