

Comparison of morphological features of different genera in subfamily Elaterinae. Useful diagnostic characters (i.e. not shared by all or almost all genera) are shown in pink, cases where that character does not match my beetle are shown in red (or orange, if partial match)

	my beetle	Elaterinae	Denticollinae	Anchastus	Anilicoides	Aniliculus	Antilogostethus	Ascesis	Augenotus	Diadysis	Idiomilla	Glyphochilus	Lingana	Megapenthes	Melanotus	Melanoxanthus	Nularborica	Opidius	Paranilicus	Rangia	Simodactylus	Yalganus
body shape	elongate			elongate, oblong	oblong, parallel-sided	oblong, parallel-sided	oblong, parallel-sided	elongate, oblong	elongate, oblong and oblong, parallel-sided	oblong, parallel-sided	oblong, ovate	elongate, oblong	elongate, oblong	elongate-oblong	elongate-oblong	elongate-oblong or oblong-ovate	oblong, parallel-sided	elongate, oblong	elongate, oblong	elongate, oblong	elongate, oblong	oblong, parallel-sided
body length/length/width	6.3: 3.8	4-31	3-33	5.6-6.5, 3.3-3.5	6.9-8.4, 3.3-4	6.4-14.2, 3.5-4	8.5-11.7, 3.3-3.8	12.1-20, 3.0-4.3	8-13.6, 3.6-4.3	16.9-20.7, 3.5-3.7	6.4-8.3, 3.3-3.2	6.8-10.6, 3.3-3.8	20.8-31.3, 3.9-4.1	12.7-23.7, 3.5-4	9.4-12.9, 3.5-3.7	3.5-12.8, 3-4.2	9.6-15.2, 3.5-3.7	10.9-24, 3.7-4.1	11-17.5, 3.5-3.9	10.8-18.8, 3.5-4	12.2-16.7, 3.6-4.4	16.3-21, 3.4-3.6
body colour	black all over	mostly drab, but some brightly coloured	mostly drab, but some brightly coloured	rusty red-brown	brownish-yellow or black with dark brownish tinge	bicoloured, usually black and orange	reddish-orange	dark brown or bicoloured dark brown and yellowish-orange or yellow	bicoloured usually black or reddish-black with rusty red elytral marks	dark reddish-black	orange-red and black-reddish brown	light or dark reddish-brown or black	dark blackish-red, lateral margins of pronotum often lighter red	black or dark brown with sides of pronotum yellowish to dark yellow	black, elytral apex and appendages dark rufous	bicoloured, pronotum usually different colour to elytra, elytra usually white or yellowish maculae on dark background	reddish or yellowish-brown	orange-brown or yellowish-brown with black markings	black and orange, or reddish-brown and yellow brown with dark brown elytral markings	orange to reddish-orange with black elytral markings	orange-brown usually with dark reddish-brown median longitudinal stripe on pronotum to elytra	orange brown with black markings
frontal carina	complete	usually complete	usually incomplete	complete	incomplete medially	incomplete medially	obsolete	obsolete	complete	incomplete medially	incomplete medially	complete	complete	complete	complete	complete	incomplete medially	incomplete medially	complete	complete	complete	incomplete medially
head shape anteriorly	convex	convex	usually flattened, sometimes more or less convex	convex	convex	convex	convex					convex										
eye size	small			normal	small	small	small					small										
eye width/interocular distance	0.17			0.3	0.1-0.2	0.2	0.2-0.3					0.2-0.3										
direction of mouthparts issuing from head capsule	ventral surface, antero-ventral			ventral surface, antero-ventral	ventral surface, antero-ventral	ventral surface, antero-ventral	ventral surface, directed downwards					ventral surface, antero-ventral										
mandibles bidentate	yes			yes	no, undentate	no, undentate	undentate	yes	yes	yes	yes	yes	yes	yes	yes	yes	no, undentate	yes	no, undentate	yes	yes	yes
mandible length/width	2.25			1.2	1.1	1.3-1.4						1.1-1.3										
maxillary palp shape	hatchet			hatchet	oblong-ovate	hatchet	oblong-ovate															
antennomere shape	subserrate	nearly always serrate or subserrate, rarely pectinate		subserrate from ant. 4	serrate from ant. 4	subserrate from ant. 4	serrate from ant. 4					subserrate				strongly serrate				greatly widened antennal pectinations	strongly serrate	strongly serrate
relative antennomere length	4-3-2, 4-5, 5-10 same size			4-3-2	4-3-2	4-3-2	4-3-2					4-3-2										
antennal insertion size/separation	small, >2 diameters			small, >2 diameters	small, >2 diameters	small, >2 diameters	small, >2 diameters					small, >2 diameters										
antenna length wrt apex of hind angle	1-2 antennomeres short of apex			exceeding apex	reaching or exceeding apex	1-2 antennomeres short	short of hind angles					usually short of apex										
flat surfaces of antennomeres with carinae?	no			no	no	no	no					no, outer apical angle strongly rounded										
prothorax length/width index	110			69-74	96-108	104-107	86-97	100-128	103-122	82-87	79-100	84-105	89-104	84-103	86-96	84-112	83-86	106-128	103-123	104-113	105-130	100-102
median longitudinal depression	not present			not present	weakly	moderate to strong	not present	weak posteriorly	weak posteriorly	not present	strong posteriorly	not present	not present	weak posteriorly	weak posteriorly	not present or weak posteriorly	not present	weak posteriorly	strongly impressed	weakly to moderately strongly impressed	weak posteriorly	weak posteriorly
anterior angle projection	weakly produced, covers only base of eye			strongly produced, cover half of eyes	not strongly produced, cover only half of eyes at most	not strongly produced, cover only half of eyes at most	not strongly produced, cover only half of eyes at most					not strongly produced, cover only half of eyes at most										
lateral carina extent	entire			entire	entire	entire	not entire, stop at 0.5mm from anterior angles					entire										
lateral carina position wrt edge of pronotum	ventral, except for posteriorly			ventral	ventral, except for posteriorly	ventral	-					ventral, except for posteriorly										
hind angles shape	unicarinate, stout, moderately elongate, not divergent			unicarinate, short stout, not divergent	unicarinate, stout, moderately elongate, not divergent to slightly divergent	unicarinate, narrow, elongate, strongly divergent	not carinate, stout, not divergent					unicarinate, stout, moderately elongate, not divergent										
base of pronotum	without sublateral carinae or incisions, notched			without sublateral carinae or incisions, notched	without sublateral carinae or incisions, notched or not	without sublateral carinae or incisions, notched	without sublateral carinae or incisions, notched					without sublateral carinae or incisions, notched										
pronotosternal suture	slightly curved inwards; marginate along hypomerall border			curved inwards; marginate along hypomerall border	slightly curved inwards; marginate along hypomerall border	curved inwards; marginate along hypomerall border	curved inwards; marginate along hypomerall border					curved inwards; marginate along hypomerall border										
hypomeron grooved	yes, for entire length of pronotosternal suture			yes, for entire length of pronotosternal suture	yes, for entire length of pronotosternal suture	yes, but only partially	??					anterior portion of polished band along inner margin of hypomeron inclined meso-dorsally										
prosternum shape	no carinae, marginate around procoxal cavities			no carinae, marginate around procoxal cavities	no carinae, marginate around procoxal cavities	with longitudinal carinae (posteriorly), marginate around procoxal cavities	no carinae, marginate around procoxal cavities					no carinae, narrowly marginate around procoxal cavities										
prosternal 'chin' present?	yes		usually yes	yes	yes	yes	no					yes										
prosternal spine orientation	inclined dorsad without ledge, with subapical tooth			inclined dorsad without ledge	inclined dorsad without ledge	horizontal, with subapical tooth	strongly declivous with ledge					inclined dorsad without ledge, with subapical tooth										
length posterior to procoxa	1.6 X coxal diam.	usually longer than coxal diam.		1.5 X coxal diam.	1.4 X	?	0.8					1.2-1.7 X										
scutellum shape	tongue-shaped, apex broadly rounded, sides notched towards base; without longitudinal carina; anterior margin well defined, sharply angulate and steeply declivous to prescutum			tongue-shaped, apex broadly rounded	tongue-shaped, apex broadly rounded	triangulate, well defined anterior margin, sharply angulate and steeply declivous to prescutum	flattened, tongue-shaped, apex broadly rounded, sides notched towards base; without longitudinal carina; anterior margin well defined, sharply angulate, steeply declivous					tongue-shaped, apex broadly rounded, sides notched towards base; without longitudinal carina; anterior margin well defined, sharply angulate and steeply declivous to prescutum										
mesocoxal cavity	deep, parallel-sided, densely lined with short, golden setae; floor with median shiny band			deep, parallel-sided, densely lined with short, golden setae; floor with median shiny band	deep, parallel-sided, densely lined with short, golden setae; floor with median shiny band	deep, parallel-sided, densely lined with short, golden setae; floor with median shiny band	deep, parallel-sided, densely lined with short, golden setae; floor with median shiny band					deep, parallel-sided; floor with median shiny band										
mesocoxal shape, separation	rounded, separated by posterior margin of mesocoxal cavity (0.5 X coxal diameter)			rounded, separated by posterior margin of mesocoxal cavity (0.3 X coxal diameter)	rounded, separated by posterior margin of mesocoxal cavity (0.4-0.5 X coxal diameter)	rounded, wide apart (0.8-0.9 X coxal diameter)	rounded, separated by posterior margin of mesocoxal cavity (0.2 X coxal diameter)					rounded, separated by posterior margin of mesocoxal cavity (0.4 X coxal diameter)										
mesocoxal cavity open to...	both mesepimeron and mesepisternum	both mesepimeron and mesepisternum, rarely to mesepimeron only	both mesepimeron and mesepisternum, rarely to mesepimeron only	mesepimeron only	both mesepimeron and mesepisternum	both mesepimeron and mesepisternum	both mesepimeron and mesepisternum					both mesepimeron and mesepisternum										
exposed portion of metepisternum	elongate, ~10 X as long as wide			elongate, 8 X as long as wide	elongate, 6.3-6.4 X as long as wide	elongate, 6.9-7 X as long as wide	4, 1-4.8 X as long as wide					very elongate, 7.1-8 X as long as wide										
mesosternum and metasternum separated by distinct midline suture	yes			yes	yes	yes	yes					yes										
hind wings well developed	yes			yes	yes	yes	yes					yes										
hind wing length/width	2.2			2.1	2.6-2.8	2.7	2.2-2.4					2.4										
wing membrane notched in anal area?	no			no	no	no	no					no										
radial cell present; length/width	yes; 4.6	yes, short (<6)	yes, short (<6)	yes; 4.3	yes; 3.9-6.0	yes; 5.1-6.4	yes					yes; 4.5-4.9										
proximal posterior angle	right angle			right angle	obtuse	right angle	acute					right angle										
r3 extent from radial cell/length of radius	0.10			0.09	0.1-0.11	0.07	0.05					0.13-0.16										
radial vein thickened apically?	no			no	no	no	no					no										
MP4 with cross vein to CuA2?	yes	yes, rarely not	yes	yes	yes	yes	yes					yes										
branch from MP3 proximal to crossvein between MP4 and CuA2?	yes			yes	yes	yes	yes					yes										
wedge cell present?	yes	yes	yes	yes	yes	yes	yes					yes										
apex of wing membrane occupies X length of wing membrane	X=0.08	<0.2	>0.2	0.2	0.2-0.4	0.1-0.2	0.2					0.2										
with epaillon sclerotisations?	yes	yes		yes	yes	yes	yes					yes										
elytra/pronotal length	2.5			3.3-3.6	2.4-2.6	2.2-2.7	3.2-3.4	3.2-4.1	2.4-2.9	3-3.2	2.5-2.9	3.3-3.8	3.1-3.5	2.6-3.2	2.7-2.9	2-3	3.4-3.7	2.1-2.4	2.3-2.8	2.1-2.8	2.7-3.1	2.4-2.8
striae impressed, strongly punctate-striate?	yes			yes	yes	yes	yes					yes										
apex shape	narrowly rounded			narrowly rounded	narrowly rounded	macronate, apices divergent	narrowly rounded					narrowly rounded										
mesotrochantin visible?	yes	yes, rarely not		no	yes	yes	yes					yes										
hind tibia shape	subcylindrical, not compressed laterally, very slightly widened towards apex			subcylindrical, not compressed laterally, very slightly widened towards apex	subcylindrical, not compressed laterally, very slightly widened towards apex	subcylindrical, not compressed laterally, very slightly widened towards apex	subcylindrical, not compressed laterally, very slightly widened towards apex					subcylindrical, not compressed laterally, very slightly widened towards apex										
hind tibia with 2 elongate, subequal apical spurs?	yes, with fine setae at base of larger one			yes, covered with very fine setae	yes	yes	yes					yes										
outer margin of hind tibia with longitudinal rows of erect spiniform setae?	??			yes	yes	yes	yes					yes, both outer and inner margins										
hind tibia longer than hind femur?	yes			yes	yes	yes	yes					yes										
hind tarsus same length as hind tibia?	yes			yes	no, longer	slightly shorter	no, longer					yes										
tarsomeres with spongiose pads apico-ventrally, occasionally simple, never lamellate	yes, tarsomere 4		yes																			
tarsomere 3 with strongly developed membranous lamella apico-ventrally?	no			yes	no	no	no					no										
tarsomere 4 with membranous lamella apico-ventrally?	yes			no	no	no	no	no	no	no	yes	yes	no	no	no	no	no	spongiose pads on tarsomeres 1-4	no	no	spongiose pads on tarsomeres 1-4	no
tarsomeres 1 and 2 with erect spiniform setae apico-ventrally?	yes			yes	yes	yes	yes					yes										
tarsomeres 1-4 pilose ventrally?	yes?			no	yes	yes	yes					no										
tarsomeres 1-4 decrease in length distally	yes			yes	yes	yes	yes					yes										
tarsomere 1 longer than tarsomere 5	yes			yes	no or subequal	no, shorter	no, same length					yes										
tarsomere 1 longer than tarsomeres 2-4 combined?	no			yes	no	no, very much shorter	no, shorter					no										
tarsomeres 2 and 3 combined shorter than tarsomere 1?	no, longer			yes	no, longer	no, longer	no, longer															