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

		Compa	arison of morph	ological features	s of different gen	era in subfamily	Elaterinae. Usef	ul diagnostic characters (i.e. not shared by all	or almost all ge	nera) are shown	in pink, cases where that char	racter does not mate	ch my beetle are show	n in red (or orange,	if partial match)			
body shape	my beetle elongate	Elaterinae	Denticollinae	Anchastus elongate, oblong	Anilicoides oblong, parallel- sided	Anilicus oblong, parallel- sided	Antoligostethus oblong, parallel- sided	Ascesis Augenotus Diadysis elongate, oblong elongate, oblong, and oblong, and oblong, sided	Idiomilta oblong-ovate	Glyphochilus elongate, oblong	Lingana Megapenthes elongate, oblong elongate-oblong	elongate-oblong el	Melanoxanthus ongate-oblong or oblong, p oblong-ovate side	arallel- elongate, oblo	Paranilicus ong elongate, oblong	Rangsia elongate, oblong	Simodactylus Yalgan elongate, oblong oblong, pa	arallel-
body length; length/width	6.3; 3.8 black all over	4-31 mostly drab, but	3-33 mostly drab, but	5.6-6.5, 3.3-3.5 rusty red-brown	6.9-8.4; 3.5-4	6.4-14.2; 3.5-4	8.5-11.7; 3.3-3.8 reddish-orange	parallel-sided 12.1-20; 3.0-4.3 8-13.6; 3.6-4.3 16.9-20.7; 3.5-3.7 dark brown or bicoloured usually dark reddish-black	6.4-8.3; 3-3.2 orange-red and	6.8-10.6; 3.3-3.8 light or dark	20.8-31.3; 3.9-4.1 12.7-23.7; 3.5-4 dark blackish-red, black or dark brown	9.4-12.9; 3.5-3.7		3.5-3.7 10.6-24; 3.7-4		10.8-18.8; 3.5-4	2.2-16.7; 3.6-4.4 16.3-21; 3 orange-brown orange brow	3.4-3.6
body colodi	Diack all Over	some brightly coloured	some brightly coloured	rusty rea-brown	black with dark brownish tinge	black and orange		bicoloured dark brown and black or reddish- black with rusty red yellowish-orange or yellow	black-reddish brown	reddish-brown or black	lateral margins of pronotum often lighter red with sides of pronotum yellowish to dark yellow	and appendages can be described as the can be describe	oronotum usually yellowish- ifferent colour to /tra, elytra usually /hite or yellowish		wn or reddish-brown	orange with black elytral markings	usually with dark black mar reddish-brown edian longitudinal ripe on pronotum	
frontal carina	complete	usually complete	usually incomplete	complete	incomplete medially	incomplete medially	obselete		incomplete medially	complete	complete complete		maculae on dark background	medially incomplete medially		complete	to elytra complete incomplete r	medially
head shape anteriorly	convex	convex	usually flattened, sometimes more or less convex	convex	convex	convex	convex			convex								
eye size eye width/interocular distance direction of mouthparts issuing	small 0.17 ventral surface,			normal 0.3 ventral surface,	small 0.1-0.2 ventral surface,	small 0.2 ventral surface,	small 0.2-0.3 ventral surface,			small 0.2-0.3 ventral surface,								
from head capsule mandibles bidentate	antero-ventral			antero-ventral	antero-ventral no, unidentate	antero-ventral	directed downwards unidentate	yes yes yes	yes	antero-ventral yes	yes yes	yes	yes no, unide	entate yes	no, unidentate	yes	yes yes	
mandible length/width maxillary palp shape	2.25 hatchet			1.2 hatchet	1.1 oblong-ovate	1.3-1.4 hatchet	oblong-ovate			1.1-1.3 hatchet								
antennomere shape	subserrate	nearly always serrate or subserrate, rarely pectinate		subserrate from ant. 4	serrate from ant. 4	subserrate from ant. 4	serrated from ant. 4			subserrate			strongly serrate		greatly widened antennal pectinations	strongly serrate	strongly se	rrate
relative antennomere length antennal insertion size/	4>3>2, 4>5, 5-10 same size small, >2 diameters			4>3>2 small, >2 diameters	4>3>2 small, >2 diameters	4>3>2 small, >2 diameters	4>3>2 small, >2 diameters			4>3>2 small, >2 diameters								
separation 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 median longitudinal depression	110 not present			69-74 not present	96-108 weakly	104-107 moderate to strong	86-97 not present	100-128 103-122 82-87 weak posteriorly weak posteriorly not present	79-100 strong posteriorly	84-105 not present	89-104 84-103 not present weak posteriorly	86-96 weak posteriorly no	84-112 83-8 It present or weak not pre		103-123 orly strongly impressed	104-113 weakly to	105-130 100-10 weak posteriorly weak post	
anterior angle projection	weakly produced, covers only base of			strongly produced, cover half of eyes	not strongly produced, cover	not strongly produced, cover	not strongly produced, cover			not strongly produced, cover			posteriorly			moderately strongly impressed		
lateral carina extent	eye			entire			only half of eyes at most not entire, stop at			only half of eyes at most								
lateral carina position wrt edge	ventral, except for			ventral	ventral, except for	ventral	0.5mm from anterior angles –			ventral, except for								
of pronotum hind angles shape	posteriorly unicarinate, stout, moderately elongate, not			unicarinate, short, stout, not divergent	unicarinate, stout, moderately elongate, not	unicarinate, narrow, elongate, strongly divergent	not carinate, stout, short, not divergent			posteriorly unicarinate, stout, moderately elongate, not								
base of pronotum	divergent without sublateral			without sublateral	divergent to slightly divergent without sublateral	without sublateral	without sublateral			divergent without sublateral								
pronotosternal suture	carinae or incisions, notched slightly curved			carinae or incision, notched curved inwards;	notched or not slightly curved	carinae or incision, notched curved inwards;	carinae or incision, notched curved inwards;			carinae or incisions, notched curved inwards;								
hypomeron grooved	inwards; marginate along hypomeral border yes, for entire			marginate along hypomeral border yes, for entire	inwards; marginate along hypomeral border yes, for entire	marginate along hypomeral border yes, but only	marginate along hypomeral border			strongly marginate along hypomeral border anterior portion of								
	length of pronotosternal suture			length of pronotosternal suture	length of pronotosternal suture	partially				polished band along inner margin of hypomeron inclined meso-								
prosternum shape	no carinae, marginate around			no carinae, marginate around	no carinae, marginate around	with longitudinal carinae	no carinae, marginate around			dorsally no carinae, narrowly marginate								
prosternal 'chin' present?	procoxal cavities yes		usually yes	procoxal cavities yes	procoxal cavities yes	(posteriorly), marginate around procoxal cavities yes	procoxal cavities			around procoxal cavities 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			tongue-shaped, apex broadly	tongue-shaped, apex broadly	triangulate, well defined anterior	flattened, tongue- shaped, apex			tongue-shaped, apex broadly								
	rounded, sides notched towards base; without longitudinal carina;			rounded	rounded		broadly rounded, sides notched			rounded, sides notched towards base; without longitudinal carina;								
	anterior margin well defined, sharply angulate and steeply declivous to					μ	defined, sharply angulate, steeply declivous			anterior margin well defined, sharply angulate and steeply declivous to								
mesocoxal cavity	prescutum deep, parallel- sided, densely lined				deep, parallel- sided, densely lined		deep, parallel- sided; floor with			prescutum deep, parallel- sided; floor with								
mesocoxal shape, separation	with short, golden setae; floor with median shiny band rounded, separated			setae; floor with median shiny band	with short, golden setae; floor with median shiny band rounded, separated	median shiny band rounded, wide	median shiny band			median shiny band rounded, separated								
mesocoxai snape, separation	by posterior margin of mesocoxal cavity (0.5 X coxal diameter)			by posterior margin	by posterior margin of mesocoxal cavity (04-0.5 X coxal diameter)	apart (0.8-0.9 coxal	by posterior margin of mesocoxal cavity (0.2 X coxal diameter)			by posterior margin of mesocoxal cavity (0.4 X coxal diameter)								
mesocoxal cavity open to	both mesepimeron and mesepisternum	and mesepisternum,	and mesepisternum,		both mesepimeron and mesepisternum		both mesepimeron			both mesepimeron and mesepisternum								
exposed portion of metepisternum	elongate, ~10 X as long as wide	rarely to mesepimeron only	rarely to mesepimeron only	elongate, 8 X as long as wide	elongate, 6.3-6.4 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 hind wing length/width	yes			yes	yes 2.6-2.8	yes	yes 2.2-2.4			yes								
wing membrane notched in anal area?	no	voc short (x6)	vos short (x6)	no	no	no	no			no yes; 4.5-4.9								
radial cell present; length/width proximal posterior angle r3 extent from radial cell/length	yes; 4.6 right angle 0.10	yes, short (<6)	yes, short (<6)	yes; 4.3 right angle 0.09	yes; 3.9-6.0 obtuse 0.1-0.11	yes; 5.1-6.4 right angle 0.07	yes acute 0.05			right angle 0.13-0.16								
of radius radial vein thickened apically? MP4 with cross vein to CuA2?	no yes	yes, rarely not	yes	no yes	no yes	no yes	no yes			no yes								
branch from MP3 proximal to crossvein between MP4 and CuA2?	yes			yes	yes	yes	yes			yes								
wedge cell present? apex of wing membrane occupies X length of wing	yes X=0.08	yes <0.2	yes >0.2	yes 0.2	yes 0.2-0.4	yes 0.1-0.2	yes 0.2			yes 0.2								
membrane with epsilon sclerotisations?	yes	yes		yes	yes	yes	yes			yes								
elytra/pronotal length striae impressed, strongly punctate-striate?	2.5 yes			3.3-3.6 yes	2.4-2.6 yes	2.2-2.7 yes	3.2-3.4 yes	3.2-4.1 2.4-2.9 3-3.2	2.5-2.9	3.3-3.8 yes	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.	3
apex shape	narrowly rounded			narrowly rounded	narrowly rounded	mucronate, apices divergent	narrowly rounded			narrowly rounded								
mesotrochantin visible? hind tibia shape	yes subcylindrical, not compressed	yes, rarely not		no subcylindrical, not compressed	yes subcylindrical, not compressed	yes subcylindrical, not compressed	yes subcylindrical, not compressed			yes subcylindrical, not compressed								
	laterally, very slightly widened towards apex			laterally, very slightly widened towards apex	compressed laterally, very slightly widened towards apex	compressed laterally, very slightly widened towards apex	laterally, very slightly widened towards apex			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 both outer and								
outer margin of hind tibia with longitudinal rows of erect spiniform setae? hind tibia longer than hind	?? yes			yes	yes	yes	yes			yes, both outer and inner margins yes								
femur? 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? tarsomeres 1 and 2 with erect	yes yes			no	no	no yes	no yes	no no no	yes	yes	no no	no	no no	spongiose pad- tarsomeres 1			oongiose pads on no tarsomeres 1-4	
spiniform setae apico-ventrally? tarsomeres 1-4 pilose ventrally? tarsomeres 1-4 decrease in	yes?			no yes	yes	yes	yes yes			no yes								
tarsomeres 1-4 decrease in length distally 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? tarsomeres 2 and 3 combined	no no, longer			yes	no no, longer	no, very much shorter no, longer	no, shorter			no no, longer								
shorter than tarsomere 1? tarsomere 2 longer than tarsomere 3?	yes			yes	yes	yes	no, longer			yes								
tarsomere 4 shorter than tarsomere 3? tarsal claws simple, without	yes	yes	yes	yes	yes	yes	yes yes	yes yes yes	yes	yes	yes yes	claws pectinate	yes yes	yes	yes	yes	yes yes	
basal setae? abdominal tergites not strongly	thin, but dark in				thin, pale in colour					thin, pale in colour								
sclerotised, thin, pale in colour? last visible abdominal sternite (ventrite 5) narrowed to broadly	colour			yes	yes	no, rounded to mucronate apex	yes			yes, either broadly or narrowly arcuate								
tergite 9 moderately strongly notched (U-shaped) medially?	yes			yes	yes	yes	yes			apex yes								
tergite 10 entirely evenly sclerotised?	yes?			yes	yes	no, laterally not as strongly as medially	yes			no, posteriorly not as strongly as medially								
aedeagus length/width ratio aedeagus length	2.8 1.3mm			2.1-2.4 0.62mm	3.8-4.7 1.1mm	4.3-6.5 1.72	2.7-3.5 1.13mm			2.2-2.4 1.6mm								
median lobe planar apex of median lobe longer than apices of parameres?	yes			yes	yes	yes yes	yes yes, slightly			yes								
basal struts/median lobe length apex of median lobe	0.3 narrowly rounded				0.3 narrowly rounded		0.2 narrowly rounded			0.3-0.4 narrowly rounded								
apex setose?	each with lateral subapical barb					simply rounded, expanded distally	each with lateral subapical barb	each with lateral each with lateral subapical barb each with lateral subapical barb subapical barb	each with lateral subapical barb	each with lateral subapical barb	each with lateral each with lateral subapical barb subapical barb		each with lateral each with subapical barb subapical		rb; subapical barb	each with lateral subapical barb	rounded apex or each with sublateral barb subapical	
apex setose? base of parameres	very sparsely well developed, extending beyond dorsal base, not			very sparsely well developed, extending beyond dorsal base, not	very sparsely well developed, extending beyond dorsal base, not	very sparsely well developed, extending beyond dorsal base, fused	very sparsely well developed, extending beyond dorsal base, not			yes well developed, extending beyond dorsal base, not								
overlap of basal piece and parameres	fused medially less than 1/4 of paramere length			fused medially less than 1/4 of paramere length	fused medially less than 1/4 of paramere length	medially less than 1/4 of paramere length	fused medially less than 1/4 of paramere length			fused medially less than 1/4 of paramere length								
basal piece/aedeagus length	0.4	_		0.4	0.4-0.5	0.2-0.3	0.3-0.4			0.4								