

# Survey of Circularly Polarized Beetles

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You may use our data if you like, but please give us credit.

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Dr. Philip Clausen, curator of the University of Minnesota insect collection  
Dr. Adam Kay of the University of St. Thomas biology department, and his students

This is a work in progress. We are adding beetles to our database every few months.

Beetles were observed through glasses with right- and left-circularly polarized "lenses."  
We illuminated them with a 60 Watt GE plant light to simulate the sun's light.  
All circularly polarized beetles were left-handed. We did not find any right-handed beetles.

This sheet compares our Nebraska and Minnesota data sets.

			U of MN	U of Neb
		<b>1 = circularly polarized, 0 = not polarized</b>		
<b>Antichira</b>	<i>inaurata</i>	M	1	
	<i>capucina</i>	N		NIC
	<i>dorystheta</i>	N		1
<b>Areoda</b>	<i>banksi</i>	B	0	1
	<i>espiritasantensis</i>	N		1
	<i>leachi</i>	N		1
<b>Byrsopolis</b>	<i>quadraticeps</i>	N		0
<b>Calamacraspis</b>	<i>concinna</i>	N		1
	<i>haroldi</i>	N		1
	<i>splendens</i>	N		1
<b>Ceroplophana</b>	<i>modiglianii</i>	N		0
<b>Chasmodia</b>	<i>amazona</i>	N		0
	<i>bipunctata</i>	N		0
	<i>dilata castanicolor</i>	N		0
	<i>emarginata</i>	M	1	
<b>Chlorata</b>	<i>cincticollis</i>	N		1
<b>Chasmodia</b>	<i>elinguis</i>	N		0
<b>Chlorata</b>	<i>haemorrhoidalis</i>	N		0
	<i>terminata guatemalensis</i>	N		1
	<i>terminata columbica</i>	N		1
<b>Chrysina</b>	<i>macropus</i>	B	1	1

Chrysophora	chrysochlora	B	1	1
Cnemida	aterrima	N		0
	intermedia	N		0
	lacerata	N		0
	lepieuri	N		1
	retusa	N		0
Cotalpa	conclamara	N		1
	consobrina	B	1	1
	flavida	B	0	0
	lanigera var langigera	B	1	1
	subcibrata	B	1	1
Dicaulucephalus	feae	N		0
	fruhstorferi	N		0
	mizunumai	N		0
Dorysthetus	isthmicus	N		1
	spp.	N		1
Elcarmeniella	striata	N		0
Fruhstorferia	anthracina	N		0
	clermonti	N		0
Thyridium/Fruhstorferia	flavipennis	B	1	0
	fujiokai	N		0
	kumei	N		0
	ohtanii	N		0
	sexmaculata	N		0
Heterosternus	oberthuri	N		0
Homonyx	sp.	N		1
Hypospidius	belti	N		1
	crassus	N		1
Lagochile	chiriquina	N		0
	circumdata	N		0
	sparsa	N		0
	trigona	N		1
	spp.	N		0
Lasiocala	lucens	N		1
Macraspis Vars. Macroaspis	aterrima	N		1
	chrysis	N		1
	cineta vars cincta	B	0	0
	clavata	B	1	1
	splendida	M	1	
(Macraspis Vars. Macroaspis)	cupripes	?	1	0
also Strigidia	dichroa	N		0
	festiva	N		1
	hirtiventris	N		1
	lateralis	N		1

	maculata	N		1
	melanaria	N		0
	morio	N		0
	plicipennis	N		1
	testaceipennis	N		0
	tetradactyla	N		0
	tristis	N		0
	spp.	N		1
Macropoidelimus	mniszechi	N		0
	crassipes	N		0
	nietoi	N		0
Mesomerodon	spillipenne	N		1
Mesosternus	halffteri	N		0
Microrutela	batesi	N		NIC
	campa	N		1
	ucalayiensis	N		1
Microrutela	vidua	N		1
	viridiaurata	N		1
Minidorysthetus	iodiellus	N		INVALID
Oogenius	castilloi	N		1
	chilensis	N		0
Oplognathus	kirbyi	N		1
Parabyrsopolis	chihuahuae	N		1
Parachrysina	borealis	N		1
	truquii	N		1
Oryctomorphus	bimaculatus	B	0	
Paracotalpa	deserta	N		1
	granicollis	B	1	1
	puncticollis	B	1	1
	ursina	B	1	1
Paradorystethus	signatipennis	N		1
Parastasia	brevipes	B	0	0
	klossi	N		0
	spp.	N		NIC
Paratelaugis	robusta	N		1
Parhoplognathus	mexicanus	N		1
Parisolea	pallida	N		0
Parisoleoides	pachytarsis	N		0
Pelidnota	aciculata	N		1
	acutipennis	N		1
	alliacea	N		1
	aurescens	N		1
	belti	N		1
	centroamericana	N		1

	chamaeleon var. ignita	N		1
	chiriquina	N		1
	crassipes	N		1
	costaricensis	N		1
Pelidnota	cuprea-complex	N		1
	cuprea var. flavipennis	N		1
	frommeri	N		1
	fulva	N		0
	glabra	N		1
	gracilis	N		1
	granulata	N		1
	guatemalensis	N		1
	hirsutiphallica	N		0
	laevissima	N		1
Pelidnota/Strigidia	liturella	B	1	1
Pelidnota/Strigidia	lucae	B	0	1
Pelidnota/Strigidia	lugubris	B	?	0
	matogrossensis			1
	notata	B	0	1
	osculatii			1
	pallidipennis			1
	parallela			1
	pennata			1
	polita			1
	prasina			1
	prolixa			1
	pubes			1
	punctata	B	1	1
	punctulata	B	1	1
	rufa			1
	strigosa			1
	uncinata			1
	vittipennis			1
	virescens			1
	xanthopyga			1
Pelidnota/Strigidia	xanthospila	B	0	0
	spp.			1
Strigidia	pulchella	M	1	
Peperonota	harringtoni	N		INVALID
Phalangagonia	sperata	M	0	
Platyrutela	cribrata	N		1
Plesiorutela	specularis	N		0
Pseudocotalpa	andrewsi	N		0
	giuliani	N		1

	sonorica	N		1
	sp	N		1
Pseudogeniates	sp.	N		NIC
Pseudomacraspis	affinis	N		1
	spp.	N		1
Ptenomela	gratiosa	B	1	1
	spp.	N		1
Rutela	cryptica	N		NIC
	dorcyi	N		0
	formosa	B	1	1
	glabrata	N		1
	heraldica	N		0
	histrion	N		0
	histrioparilis	N		0
	howdeni	N		0
	leaeta	N		1
	lineola	B	0	0
	sanguinolenta	N		0
	striata	N		0
	vetula	N		0
	epluppum?	M	0	
Chrysina/Plusiotus	adelaida	B	1	1
(the most famous ones)	adolphi	N		NIC
	alphabarrerai	N		1
	argenteola	B	1	1
	aurigans	B	1	1
	auripes	N		NIC
	aurofoveata	N		NIC
	auropunctata	N		NIC
	ameona	N		1
	aurora	B	1	NIC
	badeni	N		1
	batesi	B	1	1
	beraudi	N		NIC
	beyeri	B	1	1
	boucardi	B	1	1
	bruyyai	B	1	1
	cavei	N		1
	chalcothea	N		1
	chrysargyrea	B	1	1
	chrysopedila	B	1	1
	corderoi	N		1
	clypealis	B	1	NIC
	colima	B	1	NIC

costata	B	1	1
crassimargo	B	1	NIC
cupreomarginata	N		1
cusuquensis	N		INVALID
dianae	N		1
difficilis	N		NIC
diversa	N		NIC
erubescens	N		1
expansa	N		NIC
flohri	N		NIC
gloriosa	B	1	1
gorda	N		NIC
halffteri	N		NIC
hubbelli	N		1
intermedia	N		INVALID
karschi	N		1
lacordairei	N		NIC
laniventris	N		NIC
lecontei	B	1	1
limbata	N		1
luteomarginata	B	1	1
macropus	B	1	1
magnistriata	N		1
marginata	B	1	1
modesta	N		NIC
moroni	N		NIC
noguerai	N		NIC
optima	B	1	1
orizabae	N		1
pastori	N		NIC
pehlkei	N		NIC
peruviana	N		NIC
plusiotina	N		NIC
prasina	N		NIC
prototelica	N		NIC
psittacina	N		1
purpurata	N		NIC
purulhensis	N		NIC
quetzalcoatli	B	1	1
ratcliffei	N		1
resplendens	B	1	1
rodriguezii	N		NIC
sallaei	B	1	NIC
spectabilis	N		1

	strasseni	N		1
	taylori	B	1	NIC
	terronei	N		NIC
	tricolor	N		1
	triumphalis	N		NIC
	turckheimi	N		NIC
	victorina	N		NIC
	woodi	B	1	1
	xalixteca	B	1	NIC
	zapoteca	N		NIC
Rutelisca	durongoana	N		0
Sphaerorutela	lauta	N		1
	viridicuprea	N		1
Telaugis	aenescens	N		1
Thyridium	saphirinum	N		1
	spp.	N		1
Thyriochlorota	spp.	N		0
Viridimicus	aurescens	N		1
	cyanochlorus	N		1
	impunctatus	N		1
	omoansis	N		1
	ratcliffei	N		NIC
Xenopelidnota	anomala	N		1
Rutelini	spp.	N		1

Rutelidae: Rutelinae: Anomalini

Anomala	antiqua	M	1
Anomala	arida	M	0
Anomala	binotata	M	1
Anomala	caffra	M	1
Anomala	calceata	M	0
Anomala	cantori	M	1
Anomala	chapini	M	0
Anomala	discoidalis	M	0
Anomala	dorsata	M	0
Anomala	dubin var. aenea	M	1
Anomala	dubia var. oblonga	M	1
Anomala	dulax	M	1
Anomala	exarata	M	1
Anomala	exoleta	M	0
Anomala	flavipennis	M	0
Anomala	inconstans	M	0

Anomala	innuba	M	0
Anomala	junii	M	1
Anomala	ludoviciana	M	0
Anomala	minuta	M	0
Anomala	nigropieta	M	0
Anomala	opacicollis	M	0
Anomala	orientalis	M	1
Anomala	parvula	M	0
Anomala	probativa	M	0
Anomala	semilivida	M	0
Anomala	salcatula	M	1
Anomala	transvaalensis	M	0
Anomala	undulata	M	0
Anomala	ustulata	M	0
Anomala	viridis	M	1
Anomala	vitis	M	1
Anomala	species	M	0?
Pachystethus	lucicola	M	1
Pachystethus	marginata	M	1
Pachystethus	oblivia	M	1
Mimela	aurata	M	1
Mimela	confusius	M	1
Mimela	horsfieldi	M	1
Mimela	splendens	M	1
Mimela	testaceoviridis	M	1
Phyllopertha	horticola	M	1
Strigoderm	arboricola	M	1
Strigoderm	castor	M	1
Strigoderm	knausi	M	1
Strigoderm	pimalis	M	1
Strigoderm	pygmaea	M	1
Strigoderm	salcipennis	M	1
Popillia	bipunctata	M	0
Popillia	japonica	M	1
Popillia	marginicollis	M	1
Popillia	quadriguttata	M	1
Gnatholabris	suturalis	M	0
Anisoplia	agricola	M	0
Anisoplia	arvicola	M	0
Anisoplia	austriaca	M	0
Anisoplia	lata	M	0
Anisoplia	segetum	M	1
Anisoplia	tempestiva	M	1
Repsimus	manicatus	M	0

Anoplognathus	boisduvali	M	1
Anoplognathus	olivieri	M	1
Anoplognathus	parvulus	M	1
Anoplognathus	porosus	M	0
Anoplognathus	rugosus	M	1
Anoplognathus	suturalis	M	1
Anoplognathus	viridiaeneus	M	1
Anoplognathus	viriditarsis	M	1
Anoplostethus	opalinus	M	1
Epichrysus	lamprimoides	M	1
Adoretus	cribrosus	M	0
Adoretus	disparilis	M	0
Adoretus	flaveolus	M	0
Adoretus	impurus	M	0
Adoretus	nasutus	M	0
Adoretus	punctipennis	M	0
Adoretus	sinicus	M	0
Adoretus	tessulatus	M	0
Bolox	mutabilis	M	0
Bolox	zoubkoffi	M	0
Leucothyreus	suturalis	M	1
Geniates	catoxanthus	M	0
Aulacoppalpus	viridis	M	1
Aulacoppalpus	Sp.	M	1
Brachysternus	viridis	M	1
Hylamorpha	elegans	M	1

% of duplicates that  
match the 2 databases  
88.37

% of Duplicates with the same  
name that match  
95.00