

Checklist of Adult Carabid Beetles Known from Indiana

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A followup of Munsee's 1964 study of insects on unreclaimed stripmines (8) placed at least 32 species of adult ground beetles on Vermillion County spoilbanks. To address the question "What percent of known Indiana carabids are represented in this environment?" it was necessary to compile a checklist of ground beetles identified from within the State.

Indiana is fortunate to have W.S. Blatchley's turn-of-the-century classic *Coleoptera of Indiana*. Blatchley (1) listed 382 species of ground beetles, 351 of which are still recognized under a valid species name today in the North America Beetle Fauna (NABF) checklist (5).

In 1941, E.L. Montgomery and J.M. Amos surveyed the beetles of the Clark County State Forest but published only the non-carabids (6). N.M. Downie added new "Records of Indiana Coleoptera" in 1956 (2), again in 1958 (3) and in 1967 with C.E. White (4). This increased the known Indiana carabid fauna by 21 species recognized today.

The NABF Project checklist (5) clarified much of the synonymy and recorded 223 species from Indiana. However in many genera, species were recorded from most of the surrounding states but not for Indiana and 181 of the valid species found in Blatchley were not recorded in the NABF checklist for Indiana.

To develop a fuller checklist, the identified collections at Purdue University, Illinois Natural History Survey and the Snow Entomological Museum were examined and a list of the holdings at Indiana University was incorporated. N.M. Downie provided a list of carabids (from his large personal collection) not found in the other collections and clarified the status of "*Bembidion intermedium* Kirby," "*Elaphrus riparius* Linneaus," and "*Pentagonica flavipes* Leconte." Most synonyms were traced using the NABF list. Dr. George Ball placed six problematic names, updated the systematics, and suggested the names *Amara trivialis* Roucu., PU, and *Anillinus falli* Bar, PU, are either unpublished or in error. Species from the Munsee (7) and Schrock (8) surveys were added.

A total of 465 species is recorded for Indiana. In 1910, Blatchley listed 382 species and suggested an additional 74 might be found within the State based on records from neighboring states. Twenty-five of these are now in the present list. However, today there are an additional 124 species of ground beetles found in neighboring states in the NABF list that may have ranges extending across the Indiana border.

Since ground beetles are a large group of common beetles highly selective in habitat and therefore important indicator species (9), this carabid checklist should provide a useful inventory reference in future environmental studies. And cataloguing our current holdings of carabids should make it easier to tally the remaining species yet to be found within the State.

I would like to thank Dr. Jack R. Munsee for aid in repeating the stripmine study. Dr. George Ball identified spoil bank specimens and both Dr. Ball and N.M. Downie scanned this list for any major inaccuracies. Dr. Carl Krekeler of Valparaiso University checked the *Pseudanophthalmus* listings. Any remaining errors however, are mine. Examination of museum collections was made possible with the kind help of: Dr. Wallace LaBerge and Steve Heydon, Illinois Natural History Survey; Dr. George

Byers, Snow Entomological Museum; and Dr. W. P. McCafferty and R.D. Waltz, Purdue University. Dr. Frank Young tallied the holdings of the Indiana University collection. Without the use of the computer word processing facilities at the Association of Systematics Collections granted by Dr. Stephen Edwards, the management of this list would have been extremely laborious.

CHECKLIST OF ADULT CARABID BEETLES KNOWN FROM INDIANA

- DC = N. M. Downie Collection
 IL = Illinois Natural History Survey Collection
 IU = Indiana University
 KU = Snow Entomological Museum University of Kansas
 PU = Purdue University
 B = Blatchley's *Coleoptera of Indiana* (1)
 C = NABF Checklist (5)
 D1, D2, D3 = Records of Indiana Coleoptera I, and II and III by Downie (2), Downie (3), and Downie and White (4), respectively
 M = Munsee's 1966 stripmine collection, reported in Schrock (8)
 S = Schrock's 1981 stripmine survey (8)

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|---|-------------|
| 1. <i>Abacidus permundus</i> (Say) | IU,PU; C,D1 |
| (= <i>Pterostichus permundus</i> Say) | B |
| 2. <i>Acupalpus alternans</i> LeConte | C |
| 3. <i>Acupalpus carus</i> (LeConte) | PU;B |
| 4. <i>Acupalpus hydropicus</i> (LeConte) | PU;B |
| 5. <i>Acupalpus indistinctus</i> (Dejean) | DC |
| 6. <i>Acupalpus partiarius</i> (Say) | |
| (= <i>Agonoderus partiarius</i> Say) | B |
| (= <i>Tachistodes partiarius</i> (Say)) | PU |
| 7. <i>Acupalpus pauperculus</i> (Dejean) | |
| (= <i>Agonoderus pauperculus</i> Dejean) | B |
| (= <i>Tachistodes pauperculus</i> (Dejean)) | PU |
| 8. <i>Acupalpus rectangulus</i> Chaudoir | C |
| 9. <i>Acupalpus testaceus</i> (Dejean) | |
| (= <i>Agonoderus testaceus</i> Dejean) | B |
| (= <i>Tachistodes testaceus</i> (Dejean)) | PU |
| 10. <i>Agonum aeruginosum</i> (Dejean) | |
| (= <i>Circinalia aeruginosus</i> (Dejean)) | KU |
| (= <i>Platynus aeruginosus</i> (Dejean)) | PU;B |
| 11. <i>Agonum affine</i> Kirby | IL |
| (= <i>Platynus affinis</i> (Kirby)) | PU;B |
| 12. <i>Agonum albicrus</i> (Dejean) | |
| (= <i>Agonum albicrum</i> Dejean) | D3 |
| (= <i>Platynus albicrus</i> (Dejean)) | PU;B |
| 13. <i>Agonum anchomenoides</i> (Randall) | IL |
| (= <i>Platynus anchomenoides</i> (Randall)) | PU |
| 14. <i>Agonum basale</i> LeConte | C |
| (= <i>Platynus basalis</i> (LeConte)) | PU;B |

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| 15. | <i>Agonum collare</i> Say | C |
| | (= <i>Platynus collaris</i> Say) | B |
| 16. | <i>Agonum corvus</i> (LeConte) | |
| | (= <i>Platynus corvus</i> LeConte) | PU;B |
| 17. | <i>Agonum crenistriatum</i> (LeConte) | |
| | (= <i>Platynus crenistriatus</i> LeConte) | PU;B |
| 18. | <i>Agonum cupripenne</i> (Say) | |
| | (= <i>Platynus cupripennis</i> (Say)) | PU;B |
| 19. | <i>Agonum decorum</i> (Say) | |
| | (= <i>Platynus decorus</i> (Say)) | PU;B |
| | (= <i>Platynus obscurus</i> LeConte) | PU |
| 20. | <i>Agonum dilutipenne</i> Motschulsky | PU |
| 21. | <i>Agonum errans</i> (Say) | |
| | (= <i>Platynus errans</i> (Say)) | PU;B |
| | (= <i>Platynus errans subcordatus</i> LeConte) | PU |
| | (= <i>Platynus subcordatus</i> LeConte) | B |
| 22. | <i>Agonum excavatum</i> (Dejean) | |
| | (= <i>Platynus excavatus</i> (Dejean)) | PU;B |
| 23. | <i>Agonum extensicolle</i> (Say) | |
| | (= <i>Platynus extensicollis</i> (Say)) | PU;B |
| | (= <i>Platynus extensicollis viridis</i> (LeConte)) | PU;B |
| 24. | <i>Agonum ferreum</i> Haldeman | IL |
| | (= <i>Platynus ferreus</i> (Haldeman)) | PU;B |
| 25. | <i>Agonum formosum</i> Sturm | C |
| 26. | <i>Agonum gratiosum</i> Mannerheim | PU;C |
| | (= <i>Platynus ruficornis</i> LeConte) | PU;B |
| 27. | <i>Agonum lutulentum</i> (LeConte) | IL;C |
| | (= <i>Platynus lutulentulus</i> LeConte) | PU;B |
| 28. | <i>Agonum melanarium</i> (Dejean) | KU |
| | (= <i>Platynus melanarius</i> (Dejean)) | PU;B |
| 29. | <i>Agonum moerens</i> (Dejean) | C |
| | (= <i>Platynus moerens</i> Dejean) | B |
| 30. | <i>Agonum mutatum</i> Gemminger & Harold | IL,PU;D1 |
| | (= <i>Platynus atratus</i> LeConte) | B |
| 31. | <i>Agonum nutans</i> (Say) | |
| | (= <i>Platynus nutans</i> (Say)) | PU;B |
| 32. | <i>Agonum octopunctatum</i> (Fabricius) | |
| | (= <i>Platynus octopunctatus</i> (Fabricius)) | PU;B |
| 33. | <i>Agonum pallipes</i> Fabricius | C |
| | (= <i>Platynus limbatus</i> (Say)) | PU;B |
| 34. | <i>Agonum picticorne</i> (Newman) | D3 |
| | (= <i>Platynus picticornis</i> Newman) | PU |
| 35. | <i>Agonum placidum</i> (Say) | |
| | (= <i>Platynus placidus</i> (Say)) | PU;B |
| 36. | <i>Agonum propinquum</i> Gemminger & Harold | |
| | (= <i>Platynus piceus</i> (LeConte)) | PU |
| 37. | <i>Agonum punticeps</i> Casey | |
| | (= <i>Platynus pusillus</i> LeConte) | B |
| 38. | <i>Agonum punctiforme</i> (Say) | |
| | (= <i>Platynus punctiformis</i> (Say)) | PU;B |
| 39. | <i>Agonum quadrimaculatum</i> (Horn) | C |
| | (= <i>Platynus quadrimaculatus</i> Horn) | PU;B |

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| 40. | <i>Agonum rubripes</i> LeConte
(= <i>Platynus rubripes</i> (LeConte)) | C
PU;B |
| 41. | <i>Agonum rufipes</i> (Dejean) | DC |
| 42. | <i>Agonum striatopunctatum</i> (Dejean)
(= <i>Platynus nutans striatopunctatus</i> (Dejean))
(= <i>Platynus striatopunctatus</i> Dejean) | C
PU
B |
| 43. | <i>Agonum tenue</i> (LeConte)
(= <i>Platynus tenuis</i> LeConte) | PU;B |
| 44. | <i>Agonum thoreyi</i> Dejean
(= <i>Platynus gemellus</i> LeConte)
(= <i>Platynus picipennis</i> (Kirby)) | PU;B
PU;B |
| 45. | <i>Amara aenea</i> DeGeer | DC |
| 46. | <i>Amara alpina</i> Paykull
(= <i>Curtonotus argutus</i> Casey) | PU |
| 47. | <i>Amara angustata</i> Say | B |
| 48. | <i>Amara apricaria</i> (Paykull) | DC |
| 49. | <i>Amara avida</i> (Say)
(= <i>Leiocnemis avida</i> Say) | PU;B
PU;D1 |
| 50. | <i>Amara basillaris</i> (Say) | PU;B |
| 51. | <i>Amara californica</i> (Dejean)
(= <i>Celia californica</i> (Dejean)) | PU |
| 52. | <i>Amara chalcea</i> Dejean
(= <i>Celia chalcea</i> Dejean) | B
PU |
| 53. | <i>Amara confusa</i> LeConte
(= <i>Amara protensa</i> Putzeys) | PU;B |
| 54. | <i>Amara convexa</i> LeConte
(= <i>Amara polita</i> LeConte) | PU;B |
| 55. | <i>Amara crassispina</i> LeConte | DC |
| 56. | <i>Amara cupreolata</i> Putzeys | PU;B |
| 57. | <i>Amara erratica</i> Duftschmidt
(= <i>Celia erratica</i> (Sturm)) | B
PU |
| 58. | <i>Amara exarata</i> Dejean
(= <i>Bradytus exaratus</i> Dejean) | PU;B,C
PU |
| 59. | <i>Amara familiaris</i> Duftschmid | DC |
| 60. | <i>Amara hyperborea</i> Dejean
(= <i>Curtonotus elongatus</i> (LeConte)) | PU |
| 61. | <i>Amara interstitialis</i> Dejean | B |
| 62. | <i>Amara impuncticollis</i> Say | PU;B |
| 63. | <i>Amara latior</i> Kirby
(= <i>Bradytus latior</i> Kirby) | B
PU |
| 64. | <i>Amara littoralis</i> Mannerheim
(= <i>Amara fallax</i> LeConte) | PU
PU;B |
| 65. | <i>Amara musculis</i> (Say)
(= <i>Celia musculis</i> (Say)) | B
PU |
| 66. | <i>Amara obesa</i> (Say)
(= <i>Percosia obesa</i> Say) | PU;B
IU |
| 67. | <i>Amara pallipes</i> (Kirby)
(= <i>Triaena pallipes</i> Kirby) | D2 |
| 68. | <i>Amara patruelis</i> Dejean | PU |
| 69. | <i>Amara pennsylvanica</i> (Hayward)
(= <i>Curtonotus pennsylvanicus</i> Hayward) | B
PU |

70. *Amara quenseli* Schoenherr
(= *Amara remotestriata* Dejean) B
71. *Amara rubrica* (Haldeman)
(= *Celia rubrica* Haldeman) PU
72. *Amara sinuosa* Casey
(= *Amara subaenea* LeConte) B
73. *Amara torrida* Panzer
(= *Curtonotus infaustus* LeConte) PU
74. *Amerinus linearis* (LeConte) PU
(= *Bradycellus linearis* LeConte) B
75. *Amphasia interstitialis* (Say) PU;C
(= *Anisodactylus interstitialis* Say) B
76. *Amphasia sericea* (Harris)
(= *Anisodactylus sericea* Harris) B
(= *Pseudamphasia sericea* (Harris)) PU
77. *Anatrichis minutus* Dejean IU;B
78. *Anillinus affabilis* Brues PU
79. *Anillinus fortis* Horn B
80. *Anillinus indianae* Jeannel C
81. *Anisodactylus agricola* Say PU;B,C
82. *Anisodactylus carbonarius* (Say) PU;B
83. *Anisodactylus caenus* Say PU;B,D1
84. *Anisodactylus discoideus* Dejean B
(= *Anadaptus discoideus* (Dejean)) IU,PU
85. *Anisodactylus dulcicollis* LeFerte' PU
(= *Triplectrus dulcicollis* LaFerte') D2
86. *Anisodactylus furvus* LeConte PU;B,C
87. *Anisodactylus harrisi* LeConte PU;B,C
88. *Anisodactylus kirbyi* Lindroth DC
89. *Anisodactylus melanopus* Haldeman KU,PU;B,D1
90. *Anisodactylus merula* Germar C
91. *Anisodactylus nigerrimus* Dejean IU,PU;B
92. *Anisodactylus nigrita* Dejean B
(= *Anisodactylus interpunctatus* Kirby) PU;B
93. *Anisodactylus nivalis* Horn
(= *Anadaptus parvulus* Casey) PU
94. *Anisodactylus ovularis* Casey C
(= *Triplectrus ovularis* Casey) PU
95. *Anisodactylus rusticus* Say IL;B,C
(= *Triplectrus rusticus* (Say)) IU,PU
96. *Anisodactylus sanctaecrucis* Fabricius PU
(= *Anisodactylus baltimorensis* (Say)) PU;B
97. *Anisodactylus similis* LeConte
(= *Anisodactylus semipunctatus* LeConte) PU
98. *Anisodactylus verticalis* LeConte B
99. *Apenes lucidula* (Dejean) KU,IU; D1,S
100. *Apenes sinuata* Say B,C
101. *Apristus subsulcatus* Dejean B
(= *Apristus cordicollis* LeConte) B
102. *Ardistomis puncticollis* (Dejean) IU,PU;B,C
103. *Ardistomis viridis* (Say) PU;B,C,D1

104.	<i>Aspidoglossa subangulata</i> (Chaudoir)	IU,PU;B,C
105.	<i>Atronus pubescens</i> (Dejean)	PU;B,C,DI
106.	<i>Axinopalpus biplagiatus</i> Dejean	B,C
107.	<i>Axinopalpus californicus</i> Motschulsky	C
108.	<i>Badister flavipes</i> LeConte	C
109.	<i>Badister flavipes laticeps</i> Blatchley (= <i>Badister laticeps</i> Blatchley)	C B
110.	<i>Badister maculatus</i> LeConte	PU;B,C
111.	<i>Badister neopulchellus</i> Lindroth	DC
112.	<i>Badister notatus</i> Haldeman	PU;B,C
113.	<i>Badister ocularis</i> Casey (= <i>Badister micans</i> LeConte)	C B
114.	<i>Badister parviceps</i> Ball	C
115.	<i>Badister pulchellus</i> LeConte	B,C
116.	<i>Badister reflexus</i> LeConte	PU;B,C
117.	<i>Badister transversus</i> Casey	PU;C
118.	<i>Bembidion affine</i> Say	IU,PU;B
119.	<i>Bembidion americanum</i> Dejean	PU;B
120.	<i>Bembidion anguliferum</i> (LeConte)	PU;B
121.	<i>Bembidion carinula</i> Chaudoir	IL,PU;B
122.	<i>Bembidion chalceum</i> Dejean	PU;B
123.	<i>Bembidion concretum</i> Casey	DC
124.	<i>Bembidion confusum</i> Hayward	PU;B
125.	<i>Bembidion cordatum</i> (LeConte)	PU;B
126.	<i>Bembidion coxendix</i> Say	PU;B,C
127.	<i>Bembidion fortistriatum</i> Motschulsky (= <i>Bembidion cautum</i> (LeConte))	PU
128.	<i>Bembidion frontale</i> (LeConte) (= "Bembidion assimile Gyllenhal")	PU B
129.	<i>Bembidion fugitans</i> Casey	C
130.	<i>Bembidion graciliforme</i> Hayward	PU;B
131.	<i>Bembidion grapei</i> Gyllenhal (= <i>Bembidion picipes</i> (Kirby))	C PU;B,DI
132.	<i>Bembidion honestum</i> Say	B
133.	<i>Bembidion inaequale</i> Say	PU;B,DI
134.	<i>Bembidion lacunarium</i> Zimmermann	C
135.	<i>Bembidion laevigatum</i> Say	PU;B,DI
136.	<i>Bembidion minax</i> Casey	C
137.	<i>Bembidion nigrum</i> Say	PU;B,DI
138.	<i>Bembidion nitidum</i> Kirby	B
139.	<i>Bembidion obscurellum</i> Motschulsky	D3
140.	<i>Bembidion patrulele</i> Dejean (= <i>Bembidion fraternum</i> LeConte)	IL,PU;C B
141.	<i>Bembidion pedicellatum</i> LeConte	IU,PU;B,DI
142.	<i>Bembidion planum</i> (Haldeman) (= <i>Bembidion guexi</i> Chaudoir)	PU B
143.	<i>Bembidion postremum</i> Say	DC
144.	<i>Bembidion punctatostriatum</i> Say	PU;B
145.	<i>Bembidion quadrimaculatum oppositum</i> Say (= <i>Bembidion quadrimaculatum</i> (Linnaeus))	DC PU;B,DI
146.	<i>Bembidion rapidum</i> LeConte	DC
147.	<i>Bembidion semistriatum</i> Haldeman	B

148.	<i>Bembidion tetracolum</i> Say	DC
149.	<i>Bembidion transparens</i> Gebler	C
150.	<i>Bembidion variegatum</i> (Say)	KU,PU;B
	(= <i>Bembidion postfasciatum</i> Hamilton)	B
151.	<i>Bembidion versicolor</i> (LeConte)	IL,IU,KU,PU;B
152.	<i>Blethisa quadricollis</i> Haldeman	PU;B,C
153.	<i>Brachinus adustipennis</i> Erwin	C
154.	<i>Brachinus alternans</i> Dejean	B,C
	(= <i>Brachinus deyrollei</i> LaFerte')	B
	(= <i>Brachinus tormentarius</i> LeConte)	B
155.	<i>Brachinus americanus</i> LeConte	B,C
156.	<i>Brachinus cordicollis</i> Dejean	C
157.	<i>Brachinus cyanipennis</i> Say	C
158.	<i>Brachinus cyanochoaticus</i> Erwin	C
159.	<i>Brachinus fulminatus</i> Erwin	C
160.	<i>Brachinus fumans</i> Fabricius	C
161.	<i>Brachinus janthinipennis</i> Dejean	C
162.	<i>Brachinus medius</i> Harris	C
163.	<i>Brachinus ovipennis</i> LeConte	C
164.	<i>Brachinus quadripennis</i> Dejean	C
165.	<i>Brachinus sublaevis</i> Chaudoir	C
166.	<i>Brachinus tenuicollis</i> LeConte	C
167.	<i>Bradycellus atrimedi</i> (Say)	
	(= <i>Tachycellus atrimedi</i> Say)	B
	(= <i>Triliarthrus atrimedi</i> (Say))	PU
168.	<i>Bradycellus badipennis</i> (Haldeman)	
	(= <i>Tachycellus badiipennis</i> Haldeman)	B
	(= <i>Triliarthrus badiipennis</i> (Haldeman))	PU
169.	<i>Bradycellus nigriceps</i> LeConte	C
170.	<i>Bradycellus nigrinus</i> Dejean	
	(= <i>Tachycellus nigrinus</i> Dejean)	B
171.	<i>Bradycellus rupestris</i> Say	IU;B,C
	(= <i>Stenocellus rupestris</i> (Say))	PU
172.	<i>Calathus gregarius</i> Say	IU,KU,PU;B,C,S
173.	<i>Calathus opaculus</i> LeConte	KU,PU;B,C,S
174.	<i>Callida punctata</i> LeConte	IU;B,C
175.	<i>Calosoma calidum</i> Fabricius	IL,PU;B,C
176.	<i>Calosoma externum</i> Say	IL,PU;B
177.	<i>Calosoma frigidum</i> Kirby	B,C
178.	<i>Calosoma sayi</i> Dejean	PU
	(= <i>Calosoma alternans sayi</i> Dejean)	D3
179.	<i>Calosoma scrutator</i> Fabricius	IU,PU;B,C
180.	<i>Calosoma wilcoxi</i> LeConte	PU;B,C
181.	<i>Carabus limbatus</i> Say	IL,KU,PU;B,M,S
182.	<i>Carabus maender</i> Fischer	IL;D3
183.	<i>Carabus nemoralis</i> Muller	IU,PU
184.	<i>Carabus serratus</i> Say	IL,KU,PU;B,C,D1
185.	<i>Carabus sylvosus</i> Say	PU;B
186.	<i>Carabus vinctus</i> Weber	IU,KU,PU;B,C
187.	<i>Chlaenius aestivus</i> Say	PU;B,C
188.	<i>Chlaenius brevilabris</i> LeConte	B,C
189.	<i>Chlaenius cordicollis</i> Kirby	C

190. *Chlaenius emarginatus* Say IU,KU;C,S
(= *Anomoglossus emarginatus* Say) B
191. *Chlaenius erythropus* Germar B,C
192. *Chlaenius impunctifrons* Say B,C
193. *Chlaenius laticollis* Say IU;B,C
194. *Chlaenius leucoscelis* Chevrolat PU;B,D1
195. *Chlaenius lithophilus* Say IL;C
(= *Brachylobus lithophilus* Say) B
196. *Chlaenius niger* Randall B,C
197. *Chlaenius nemoralis* Say IU,B,C
198. *Chlaenius pensylvanicus* Say B,C
199. *Chlaenius platyderus* Chaudoir C
(= *Chlaenius diffinis* Chaudoir) PU;B
200. *Chlaenius prasinus* Dejean B,C
201. *Chlaenius purpuricollis* Randall IL;B,C
202. *Chlaenius pusillus* (Say) C
(= *Anomoglossus pusillus* Say) B
203. *Chlaenius tomentosus* Say IL;B,C
204. *Chlaenius tricolor* Dejean C
205. *Chlaenius sericeus* Forster B,C
206. *Chlaenius solitarius* Say B,C
207. *Clivina americana* Dejean PU;B
208. *Clivina bipustulata* (Fabricius) IU,KU,PU;B
209. *Clivina dentipes* Dejean KU,PU;B
210. *Clivina impressifrons* LeConte PU;B,C
211. *Clivina postica* LeConte D3
212. *Clivina puntigera* LeConte PU;B,C,D1
213. *Clivina rubicunda* LeConte B,C
214. *Clivina rufa* LeConte PU;B,C,D1
215. *Colliurus pensylvanica* (Linnaeus) IU;B
(= *Casnonia pensylvanica* Linnaeus)
216. *Coptodera aerata* Dejean KU;B,C
217. *Cratacanthus dubius* (Beauvois) IL,PU;B,C
218. *Cyclotrachelus convivus* (LeConte) KU,PU;C,S
(= *Evarthrus convivus* LeConte)
219. *Cyclotrachelus furtivus* (LeConte) PU
(= *Eumolops furtiva* (LeConte)) B
(= *Evarthrus furtivus* (LeConte))
220. *Cyclotrachelus obsoletus* (Say) KU,PU;C,S
(= *Evarthrus obsoletus* Say) B
(= *Pterostichus obsoletus* Say)
221. *Cyclotrachelus seximpressus* (LeConte) KU,PU;B,C,S
(= *Evarthrus seximpressus* (LeConte))
222. *Cyclotrachelus sigillatus* (Say) PU;B,D1
(= *Evarthrus sigillatus* (Say)) B
(= *Evarthrus americanus* Dejean) PU;B
(= *Evarthrus orbatus* (Newman))
222. *Cyclotrachelus sodalis* (LeConte) KU,PU;B,C,D1,M,S
(= *Evarthrus sodalis* LeConte)
223. *Cymindis americana* Dejean KU;B,S
224. *Cymindis limbata* (Dejean) KU;B,C,D1,S
(= *Pinacodera limbata* (Dejean))

225. *Cymindis neglecta* Haldeman DC
 226. *Cymindis pilosa* Say B
 227. *Cymindis platicollis* (Say)
 (= *Pinacodera platicollis* (Say)) PU;B,C,D1
 228. *Dicaelus ambiguus* LaFerte' IU,KU,PU;B,C,D1,S
 229. *Dicaelus dilatus sinuatus* Ball
 (= *Dicaelus dilatus* Say) PU;B,C
 230. *Dicaelus elongatus* Bonelli KU,PU;B,C,S
 231. *Dicaelus furvus* Dejean KU;B,C,S
 (= *Dicaelus ovalis* LeConte) B
 232. *Dicaelus furvus carinatus* Dejean PU
 233. *Dicaelus politus* Dejean IU,PU;B,C
 234. *Dicaelus purpuratus* Bonelli IU,KU,PU;B,C,S
 235. *Dicaelus sculptilis intricatus* LeConte
 (= *Dicaelus sculptilis* Say) B,C
 236. *Dicaelus teter* Bonelli IL;B
 237. *Diplocheila assimilis* (LeConte)
 (= *Rembus assimilis* LeConte) PU
 238. *Diplocheila impressicollis* Dejean PU;B
 (= *Diplocheila impressicollis alternans*) Casey B
 (= *Diplocheila laticollis* LeConte) B
 (= *Rembus laticollis* LeConte) PU
 239. *Diplocheila major* LeConte PU;C
 (= *Diplocheila laticollis major* LeConte) B
 240. *Diplocheila obtusa* LeConte B,C
 (= *Rembus obtusa* LeConte) PU;D1
 241. *Diplocheila striatopunctata* LeConte IU;C
 242. *Discoderus parallelus* (Haldeman) PU;B
 243. *Dromius piceus* Dejean B,C
 (= *Dromius picipes* [sic] Dejean) D1
 244. *Dyschirius erythrocerus* LeConte PU;B,C,D1
 245. *Dyschirius globulosus* Say IU,PU;B
 246. *Dyschirius haemorrhoidalis* Dejean PU;B,C
 247. *Dyschirius integer* LeConte
 (= *Dyschirius nigripes* LeConte) PU;B
 248. *Dyschirius longulus* LeConte PU;B,C
 249. *Dyschirius pilosus* LeConte
 (= *Dyschirius hispidus* LeConte) PU;B,D1
 250. *Dyschirius sphaericollis* Say PU;B,C,D1
 251. *Dyschirius terminatus* LeConte PU;B,C,D2
 252. *Elaphropus dolosus* (LeConte)
 (= *Tachys dolosa* (LeConte)) PU
 (= *Tachys dolosus* (LeConte)) B
 253. *Elaphropus ferrugineus* (Dejean)
 (= *Tachys ferrugineus* (Dejean)) PU;B
 254. *Elaphropus granarius* (Dejean)
 (= *Tachys granaria* (Dejean)) PU
 (= *Tachys granarius* (Dejean)) B
 255. *Elaphropus incurvus* Say C
 (= *Tachys incurva* (Say)) PU
 (= *Tachys incurvus* (Say)) B

256.	<i>Elaphropus parvicornis</i> Notman	C
257.	<i>Elaphropus tripunctatus</i> Say (= <i>Tachys tripunctatus</i> Say)	C B
258.	<i>Elaphropus vernicatus</i> Casey	C
259.	<i>Elaphropus vivax</i> (LeConte) (= <i>Tachys capax</i> LeConte) (= <i>Tachys vivax</i> (LeConte))	B PU;B
260.	<i>Elaphropus xanthopus</i> (Dejean) (= <i>Tachys xanthopus</i> (Dejean))	PU;B
261.	<i>Elaphrus californicus</i> Mannerheim (= <i>Elaphrus riparius</i> Linnaeus)	DC D2
262.	<i>Elaphrus cicatricosus</i> LeConte	PU;B,C
263.	<i>Elaphrus clairvillei</i> Kirby	B
264.	<i>Elaphrus fuliginosus</i> Say	PU;B,C
265.	<i>Elaphrus laevigatus</i> LeConte	B
266.	<i>Elaphrus lecontei</i> Crotch	IL
267.	<i>Elaphrus lindrothi</i> Goulet	
268.	<i>Elaphrus ruscarius</i> Say	IU,PU;B
269.	<i>Episcopellus autumnalis</i> (Say) (= <i>Harpalus autumnalis</i> Say)	PU;C,D2 B
270.	<i>Euphorticus pubescens</i> (Dejean)	D3
271.	<i>Euryderus grossus</i> (Say) (= <i>Nothopus grossus</i> Say) (= <i>Nothopus valens</i> Casey) (= <i>Nothopus zabroides</i> LeConte)	B PU PU;D1
272.	<i>Galerita bicolor</i> Drury	KU;B,S
273.	<i>Galerita janus</i> Fabricius	IU,KU;B,C,S
274.	<i>Geopinus incrassatus</i> (Dejean)	IU,PU;B,C
275.	<i>Gynandropus hylacis</i> (Say)	PU;B,C
276.	<i>Harpalus actiosus</i> Casey	PU;C
277.	<i>Harpalus affinis</i> Schrank (= <i>Harpalus viridianeus</i> Beauvois)	PU
278.	<i>Harpalus bicolor</i> (Fabricius) (= <i>Harpalus compar</i> LeConte)	KU,PU;S PU;B
279.	<i>Harpalus caliginosus</i> (Fabricius)	IL,IU,KU,PU;B,M
280.	<i>Harpalus erraticus</i> Say	PU;B
281.	<i>Harpalus erythropus</i> Dejean	KU,PU;B,C,M
282.	<i>Harpalus fallax</i> LeConte	DC
283.	<i>Harpalus faunus</i> Say (= <i>Harpalus convivus</i> LeConte)	PU;B,C B
284.	<i>Harpalus fulgens</i> Csiki (= <i>Harpalus nitidulus</i> Chaudoir)	C PU;B,D1
285.	<i>Harpalus fuliginosa</i> Duftschmid	DC
286.	<i>Harpalus herbivagus</i> Say	PU;B
287.	<i>Harpalus indianus</i> (Csiki) (= <i>Harpalus testaceus</i> LeConte) (= <i>Pharalus indianus</i> Csiki) (= <i>Pharalus testaceus</i> (LeConte))	C B PU;D1 PU
288.	<i>Harpalus laticeps</i> LeConte	KU;B,C,D1
289.	<i>Harpalus lewisi</i> LeConte	DC
290.	<i>Harpalus longicollis</i> LeConte (= <i>Harpalus vagans</i> LeConte)	KU;C,S B

291.	<i>Harpalus mobilis</i> Casey	PU
292.	<i>Harpalus paratus</i> Casey	DC
293.	<i>Harpalus pensylvanicus</i> DeGeer (= <i>Harpalus longior</i> Kirby)	PU;B,C B
294.	<i>Harpalus pleuriticus</i> Kirby	DC
295.	<i>Harpalus protractus</i> Casey	PU;C
296.	<i>Harpalus viduus</i> LeConte	PU;B
297.	<i>Helluomorphoides ferrugineus</i> (LeConte)	D3
298.	<i>Helluomorphoides praeustus bicolor</i> Harris	PU;C
299.	<i>Helluomorphoides texanus</i> LeConte	B,C
300.	<i>Lebia abdominalis</i> Chaudoir	B,C
301.	<i>Lebia analis</i> Dejean	PU;B,C,D1
302.	<i>Lebia atriventris</i> Say	IL,IU;B,C
303.	<i>Lebia bivittata</i> Fabricius	B,C
304.	<i>Lebia collaris</i> Dejean	C
305.	<i>Lebia divisa</i> LeConte	PU;D1
306.	<i>Lebia fuscata</i> Dejean	PU;B,C,D1
307.	<i>Lebia grandis</i> Hentz	IU;B,C
308.	<i>Lebia lobulata</i> LeConte	PU;B,C,D1
309.	<i>Lebia marginicollis</i> Dejean	KU;C,D3
310.	<i>Lebia ornata</i> Say	KU;B,C,S
311.	<i>Lebia pectita</i> Horn	C
312.	<i>Lebia pleuritica</i> LeConte	D3
313.	<i>Lebia pulchella</i> Dejean	IU;D3
314.	<i>Lebia pumila</i> Dejean (= <i>Lebia rhodopus</i> Schwarz)	B,C B,D2
315.	<i>Lebia solea</i> Hentz (= <i>Lebia scapularis</i> Dejean)	C IU;B
316.	<i>Lebia tricolor</i> Say	C,D3
317.	<i>Lebia viridipennis</i> Dejean	B,C
318.	<i>Lebia viridis</i> Say	IU;B,C
319.	<i>Lebia vittata</i> Fabricius (= <i>Lebia furcata</i> LeConte)	B,C B
320.	<i>Leptotrachelus dorsalis</i> Fabricius	B
321.	<i>Loxandrus agillis</i> Dejean	B
322.	<i>Loxandrus brevicollis</i> LeConte	B,C
323.	<i>Loxandrus cincinnatiensis</i> Casey	C
324.	<i>Loxandrus duryi</i> Wright	C
325.	<i>Loxandrus erraticus</i> Dejean	B
326.	<i>Loxandrus extendus</i> Allen	C
327.	<i>Loxandrus gibbus</i> Allen	C
328.	<i>Loxandrus minor</i> Chaudoir	B,C
329.	<i>Loxandrus nitidulus</i> LeConte	C
330.	<i>Loxandrus rectus</i> Say	IU;B
331.	<i>Loxandrus robustus</i> Allen	C
332.	<i>Loxandrus velocipes</i> Casey	C
333.	<i>Loxandrus velox</i> Dejean	B
334.	<i>Loxandrus vulneratus</i> Casey	C
335.	<i>Metabletus americanus</i> Dejean	B
336.	<i>Micratopus aenescens</i> (LeConte)	PU
337.	<i>Microlestes nigrinus</i> Mannerheim (= <i>Blechrus nigrinus</i> (Mannerheim))	PU;D1 B

338. *Microlestes pusio* LeConte
 (= *Blechrus pusio* LeConte) B
339. *Mioptachys flavicauda* (Say)
 (= *Tachymenis flavicauda* (Say)) KU
 (= *Tachys flavicauda* (Say)) IU,PU;B
340. *Myas coracinus* Say B,C
 (= *Trigonognatha coracinus* (Say)) PU
341. *Nebria lacustris* Casey PU;C,D3
342. *Nebria pallipes* Say PU;B,C
343. *Nomius pygmaeus* (Dejean) PU
344. *Notiobia nitidipennis* (LeConte)
 (= *Anisotarsus nitidipennis* LeConte) PU;B,D1
 (= *Anisodactylus nitidipennis* LeConte) PU
345. *Notiobia picea* (LeConte) C
 (= *Anisodactylus sayi* Blatchley) PU;B
 (= *Eurytrichus piceus* LeConte) IU
346. *Notiobia terminata* Say C
 (= *Anisodactylus terminatus* (Say)) PU;B
 (= *Anisodactylus agilis* (Dejean)) PU
347. *Notiophilus aeneus* Herbst IU,KU,PU;B,C,S
348. *Notiophilus novemstriatus* LeConte PU;C
349. *Notiophilus semistriatus* Say IU,KU,PU;B,C,S
350. *Olisthopus parmatus* (Say) PU;C
351. *Oodes amaroides* Dejean B
352. *Oodes americanus* Dejean B
 (= *Oodes fluvialis* LeConte) B
353. *Oodes parallelus* Say KU
 (= *Lachnocrepis parallelus* Say) B
354. *Omophron americanum* Dejean IL,PU;B
355. *Omophron nitidum* LeConte PU;B,C
356. *Omophron robustum* Horn PU;B,C
357. *Omophron tessellatum* Say IL,KU,PU;C
358. *Panagaeus crucigerus* Say PU;B,C
359. *Panagaeus fasciatus* Say IU,PU;B,C
360. *Paratachys oblitus* Casey C
361. *Paratachys proximus* (Say)
 (= *Tachys proximus* (Say)) IU,KU,PU;B
362. *Paratachys pumilus* Dejean
 (= *Tachys coruscus* LeConte) PU;B
363. *Paratachys scitulus* (LeConte)
 (= *Tachys scitulus* LeConte) PU;B
364. *Pasimachus elongatus* LeConte IL,PU;B
365. *Pasimachus depressus* Fabricius PU;B
366. *Pasimachus punctulatus* Haldeman PU;B,C
367. *Pasimachus sublaevis* Beauvois C
 (= *Pasimachus sublaevis* Bonelli) B
368. *Patrobus longicornis* Say IL,IU,PU;B
369. *Pentagonica picticornis* Bates DC
 (= *Pentagonica flavipes* (LeConte)) PU;B,D1
370. *Pericompus ephippiatus* (Say) PU;D1
 (= *Tachys ephippiatus* (Say)) PU;B

371. *Perigona nigriceps* (Dejean) PU;C,D2
 (= *Perigona pallipennis* (LeConte)) PU;B
372. *Platynus angustatus* Dejean PU
373. *Platynus brunneomarginatus* Mannerheim PU
374. *Platynus caudatus* LeConte B,C
 (= *Rhadine caudata* LeConte) PU
375. *Platynus cincticollis* Say B
376. *Platynus decentis* Say
 (= *Platynus sinuatus* (Dejean)) IU,PU;B
 (= "Platynus decens" Say) PU,B
377. *Platynus hypolithos* (Say) IL,IU,PU
 (= *Platynus hypolithus* Say) B
378. *Platynus opaculus* LeConte B
379. *Platynus parmarginatus* Hamilton PU;B,C
380. *Platynus tenuicollis* LeConte
 (= *Platynus reflexus* LeConte) PU;B
381. *Plochionus timidus* Haldeman B
382. *Polyderis laevus* (Say)
 (= *Tachys laevus* (Say)) PU;B
383. *Pseudaptinus pygmaeus* (Dejean) D3
384. *Pseudanophthalmus barri* Krekeler C
385. *Pseudanophthalmus blatchleyi* Barr C
386. *Pseudanophthalmus chthonius* Krekeler C
387. *Pseudanophthalmus emersoni* Krekeler C
388. *Pseudanophthalmus eremita* (Horn) C
 (= *Anophthalmus eremita* Horn) B
389. *Pseudanophthalmus leonae* Barr C
390. *Pseudanophthalmus shilohensis* Krekeler C
391. *Pseudanophthalmus shilohensis boonensis* Krekeler C
392. *Pseudanophthalmus shilohensis mayfieldensis*
 Krekeler C
393. *Pseudanophthalmus tenuis* Horn IL,PU;C
 (= *Anophthalmus tenuis* Horn) B
394. *Pseudanophthalmus tenuis blatchleyi* Barr C
395. *Pseudanophthalmus tenuis jeanneli* Krekeler C
396. *Pseudanophthalmus tenuis morrisoni* Jeannel C
397. *Pseudanophthalmus tenuis stricticollis* Jeannel C
398. *Pseudanophthalmus youngi* Krekeler C
399. *Pseudanophthalmus youngi donaldsoni* Krekeler C
400. *Pterostichus adoxus* (Say) PU;B
401. *Pterostichus adstrictus* Eschscholtz
 (= *Bothriopterus luzzoti* (Dejean)) PU
 (= *Pterostichus luzzotii* Dejean) B
402. *Pterostichus bispiculatus* Casey C
403. *Pterostichus caudicalis* Say B
 (= *Melanius caudicalis* (Say)) PU
404. *Pterostichus chalcites* Say KU;C,S
 (= *Poecilus chalcites* Say) PU
 (= *Pterostichus sayi* Brulle) B
405. *Pterostichus corvinus* Dejean B
 (= *Melanius corvinus* (Dejean)) PU

406.	<i>Pterostichus coracinus</i> Newman	B
	(= <i>Euferonia coracina</i> (Newman))	PU
407.	<i>Pterostichus ebeninus</i> Dejean	B
	(= <i>Melanius ebeninus</i> Dejean)	PU
408.	<i>Pterostichus femoralis</i> Kirby	PU;B
409.	<i>Pterostichus haldemani</i> (LeConte)	IU;B,C
	(= <i>Lophoglossus haldemani</i> (LeConte))	PU
410.	<i>Pterostichus honestus</i> Say	B
	(= <i>Gastrellarius honestus</i> (Say))	PU
411.	<i>Pterostichus leconteianus</i> Lutshnik	IU,PU
	(= <i>Pterostichus erythropus</i> Dejean)	B
412.	<i>Pterostichus luctuosus</i> Dejean	B
	(= <i>Melanius luctuosus</i> (Dejean))	PU
413.	<i>Pterostichus lucublandus</i> Say	B
	(= <i>Poecilus lucublandus</i> Say)	PU
	(= <i>Pterostichus convexicollis</i> Say)	KU
414.	<i>Pterostichus melanarius</i> (Illiger)	D3
415.	<i>Pterostichus moestus</i> Say	
	(= <i>Refonia moesta</i> (Say))	PU
416.	<i>Pterostichus mutus</i> Say	B
	(= <i>Dysidius mutus</i> (Say))	PU
417.	<i>Pterostichus obscurus</i> Say	B
	(= <i>Gasterosticta obscura</i> (Say))	PU;D1
418.	<i>Pterostichus ohionis</i> Csiki	
	(= <i>Dysidius purpuratus</i> LeConte)	PU;D1
	(= <i>Pterostichus purpuratus</i> LeConte)	B
419.	<i>Pterostichus patruelis</i> Dejean	B
	(= <i>Micromaseus patruelis</i> (Dejean))	PU
420.	<i>Pterostichus pennsylvanicus</i> LeConte	B
421.	<i>Pterostichus relictus</i> Newman	B,C
	(= <i>Euferonia relictus</i> (Newman))	PU
422.	<i>Pterostichus rostratus</i> Newman	C
423.	<i>Pterostichus scrutator</i> (LeConte)	B
	(= <i>Lophoglossus scrutator</i> LeConte)	
424.	<i>Pterostichus stygicus</i> Say	IU,KU,PU;B,C,S
	(= <i>Euferonia stygica</i> (Say))	PU
425.	<i>Pterostichus tartaricus</i> (Say)	B,C
	(= <i>Lophoglossus tartaricus</i> (Say))	PU
426.	<i>Pterostichus tristis</i> Dejean	PU
427.	<i>Scaphinotus andrewsi germari</i> (Chaudoir)	
	(= <i>Cychnus andrewsi germari</i> Chaudoir)	B
428.	<i>Scaphinotus elevatus flammeus</i> Haldeman	
	(= <i>Scaphinotus elevatus</i> Fabricius)	IL
	(= <i>Cychnus elevatus</i> Fabricius)	B
429.	<i>Scaphinotus tricarinatus</i> Casey	
	(= <i>Scaphinotus andrewsi tricarinatus</i> Casey)	PU
430.	<i>Scaphinotus unicolor</i> (Fabricius)	PU;C
431.	<i>Scaphinotus unicolor heros</i> Harris	C
	(= <i>Cychnus unicolor</i> Oliver)	B
432.	<i>Scarites substriatus</i> Haldeman	KU,PU;B,M
433.	<i>Scarites subterraneus</i> Fabricius	IL,KU,PU;B,S
434.	<i>Schizogenius amphibius</i> Haldeman	B

435.	<i>Schizogenius ferrugineus</i> Putzeys	PU;B,D1
436.	<i>Schizogenius lineolatus</i> Say	PU;B,D1
437.	<i>Selenophorus ellipticus</i> Dejean	PU;B
438.	<i>Selenophorus gagatinus</i> Dejean	KU,PU;B,C,D1,S
439.	<i>Selenophorus granarius</i> Dejean	DC
440.	<i>Selenophorus opalinus</i> LeConte	PU;B
441.	<i>Selenophorus pedicularius</i> Dejean	PU;B,C,D1
442.	<i>Sericoda bogemanni</i> (Gyllenhal)	
	(= <i>Platynus bogemanni</i> (Gyllenhal))	PU;B
	(= <i>Agonum bogemanni</i> Gyllenhal)	KU
443.	<i>Sphaeroderus lecontei</i> Dejean	IL,IU,KU,PU;S
	(= <i>Cychrus lecontei</i> Dejean)	B
444.	<i>Sphaeroderus stenostomus</i> Weber	C
	(= <i>Sphaeroderus stenostomus indianae</i> Blatchley)	PU
	(= <i>Cychrus stenostomus indiane</i> Leng)	B
445.	<i>Stenocrepis cupreus</i> (Chaudoir)	C
	(= <i>Oodes cupreus</i> Chaudoir)	B
446.	<i>Stenocrepis quatuordecimstriata</i> (Chaudoir)	C
	(= <i>Oodes 14-striatus</i> Chaudoir)	B
447.	<i>Stenolophus carbonarius</i> (Dejean)	KU,PU;B,S
448.	<i>Stenolophus comma</i> Fabricius	IL,IU,PU
449.	<i>Stenolophus conjunctus</i> (Say)	PU;B
450.	<i>Stenolophus dissimilis</i> Dejean	B,C
451.	<i>Stenolophus fuliginosus</i> Dejean	PU;B
452.	<i>Stenolophus fuscatus</i> Dejean	PU
	(= <i>Stenolophus plebejus fuscatus</i> Dejean)	B
453.	<i>Stenolophus lecontei</i> Chaudoir	
	(= <i>Agonoderus lecontei</i> Chaudoir)	PU
	(= <i>Agonoderus pallipes</i> "(Fabricius)")	IU,PU,B
454.	<i>Stenolophus lineola</i> (Fabricius)	
	(= <i>Agonoderus lineola</i> (Fabricius))	PU;B
455.	<i>Stenolophus ochropezus</i> Dejean	IU,PU;B
456.	<i>Stenolophus plebejus</i> Dejean	B
457.	<i>Stenolophus rotundicollis</i> Haldeman	
	(= <i>Stenolophus scitulus</i> Casey)	PU
458.	<i>Synuchus impunctatus</i> (Say)	IU
	(= <i>Calathus impunctatus</i> Say)	B
	(= <i>Pristodactyla impunctata</i> (Say))	PU;D1
459.	<i>Tachyta nana inornata</i> Say	C
	(= <i>Tachyta nana</i> (Gyllenhal))	PU
	(= <i>Tachys nanus</i> (Gyllenhal))	B
460.	<i>Tetragonoderus fasciatus</i> Haldeman	IU;B,C
461.	<i>Trechus chalybeus</i> Dejean	B
462.	<i>Trichotichnus dichrous</i> Dejean	KU;C,S
	(= <i>Harpalus dichrous</i> Dejean)	PU;B
463.	<i>Trichotichnus vulpeculus</i> (Say)	
	(= <i>Harpalus vulpeculus</i> Say)	PU;B
464.	<i>Xestonotus lugubris</i> (Dejean)	PU
	(= <i>Anisodactylus lugubris</i> Dejean)	B
465.	<i>Zuphium americanum</i> Dejean	D3

The following Indiana "records" are highly doubtful (G. Ball, personal cor-

respondence): *Bembidion oblongulum* (Mannerheim), PU, is probably *B. wingatei* Bland; *Pinacodera russata* Newman, C, is now *Cymindis complanata* Dejean which does not likely occur farther north than Alabama; and *Scaphinotus elevatus tenebricosus* Roeschke, PU.

Literature Cited

1. Blatchley, W.S. 1910. An Illustrated Descriptive Catalogue of the Coleoptera or Beetles Known to Occur in Indiana. The Nature Publishing Co., Indianapolis, Indiana. 1385. p.
2. Downie, N. M. 1956. Records of Indiana Coleoptera, I. Proceedings of the Indiana Academy of Science. 66:115-124.
3. Downie, N. M. 1958. Records of Indiana Coleoptera, II. Proceedings of the Indiana Academy of Science. 66:115-124.
4. Downie, N. M. and C. E. White. 1967. Records of Indiana Coleoptera, III. Proceedings of the Indiana Academy of Science. 76: 308-316.
5. Erwin, T., D. R. Whitehead and G. E. Ball. 1977. Family 4. Carabidae, The Ground Beetles. *In*: Checklist of the Beetles of North and Central America and the West Indies. Flora and Fauna Publications, Gainesville, Florida. 68 p.
6. Montgomery, B. E. and J. M. Amos. 1941. Contributions to a list of the Coleoptera of the Clark County State Forest. Proceedings of the Indiana Academy of Science. 50:251-258.
7. Munsee, Jack R. 1966. The Ecology of Ants of Stripmine Spoil Banks. Ph.D. Dissertation. Purdue University, West Lafayette, Indiana 243 p.
8. Schrock, John R. 1983. The Succession of Insects on Unreclaimed Coal Strip Mine Spoil Banks in Indiana. Ph.D. Dissertation, University of Kansas, Lawrence, Kansas. 207 p.
9. Thiele, H.-U. 1977. Carabid Beetles in Their Environment. Springer-Verlag, Berlin. 369 p.