

MOUNT DESERT through 1996.

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| 1. <i>Acupalpus partiaris</i> | 46. <i>Bradycellus nigrinum</i> |
| 2. <i>Agonum aeruginosum</i> | 47. <i>Calathus gregarius</i> |
| 3. <i>Agonum affine</i> | 48. <i>Calathus ingratus</i> |
| 4. <i>Agonum cupripenne</i> | 49. <i>Carabus maeander</i> |
| 5. <i>Agonum darlingtoni</i> | 50. <i>Carabus serratus</i> |
| 6. <i>Agonum deceptivum</i> | 51. <i>Chlaenius emarginatus</i> |
| 7. <i>Agonum fidele</i> | 52. <i>Chlaenius pensylvanicus</i> |
| 8. <i>Agonum gratiosum</i> | 53. <i>Cicindlea duodecimguttata</i> |
| 9. <i>Agonum harrisi</i> | 54. <i>Cicindela limbalis</i> |
| 10. <i>Agonum melanarium</i> | 55. <i>Cicindela repanda</i> |
| 11. <i>Agonum muelleri</i> | 56. <i>Cicindela sexguttata</i> |
| 12. <i>Agonum mutatum</i> | 57. <i>Cicindela tranquebarica</i> |
| 13. <i>Agonum palustre</i> | 58. <i>Clivina fossor</i> |
| 14. <i>Agonum placidum</i> | 59. <i>Dromius piceus</i> |
| 15. <i>Agonum retractum</i> | 60. <i>Dyschirius integer</i> |
| 16. <i>Agonum sordens</i> | 61. <i>Elaphrus californicus</i> |
| 17. <i>Agonum tenue</i> | 62. <i>Elaphrus olivaceus</i> |
| 18. <i>Amara angustata</i> | 63. <i>Elaphrus ruscarius</i> |
| 19. <i>Amara avida</i> | 64. <i>Harpalus laticeps</i> |
| 20. <i>Amara cupreolata</i> | 65. <i>Lebia fuscata</i> |
| 21. <i>Amara littoralis</i> | 66. <i>Levia moesta</i> |
| 22. <i>Amara lunicollis</i> | 67. <i>Lebia ornata</i> |
| 23. <i>Amara quenseli</i> | 68. <i>Lebia pumila</i> |
| 24. <i>Anisodactylus harrisi</i> | 69. <i>Lebia viridis</i> |
| 25. <i>Anisodactylus nigerrimus</i> | 70. <i>Lebia vittata</i> |
| 26. <i>Anisodactylus nigrita</i> | 71. <i>Mioptachys flavicauda</i> |
| 27. <i>Anisodactylus rusticus</i> | 72. <i>Nebria gyllenhali</i> |
| 28. <i>Anisodactylus sanctaecrucis</i> | 73. <i>Nebria pallipes</i> |
| 29. <i>Bembidion concretum</i> | 74. <i>Notiophilus aeneus</i> |
| 30. <i>Bembidion forttestriatum</i> | 75. <i>Oxypselaphus pusillus</i> |
| 31. <i>Bembidion frontale</i> | 76. <i>Platynus decentis</i> |
| 32. <i>Bembidion graciliforme</i> | 77. <i>Platynus mannerheimi</i> |
| 33. <i>Bembidion lacunarium</i> | 78. <i>Platynus tenuicollis</i> |
| 34. <i>Bembidion patrulele</i> | 79. <i>Polyderis laevis</i> |
| 35. <i>Bembidion praticola</i> | 80. <i>Pterostichus adoxus</i> |
| 36. <i>Bembidion quadratulum</i> | 81. <i>Pterostichus adstrictus</i> |
| 37. <i>Bembidion quadrimaculatum</i>
<i>oppositum</i> | 82. <i>Pterostichus commutabilis</i> |
| 38. <i>Bembidion scopulinum</i> | 83. <i>Pterostichus coracinus</i> |
| 39. <i>Bembidion semicinctum</i> | 84. <i>Pterostichus corvinus</i> |
| 40. <i>Bembidion transparens</i> | 85. <i>Pterostichus honestus</i> |
| 41. <i>Bembidion variegatum</i> | 86. <i>Pterostichus lachrymosus</i> |
| 42. <i>Bembidion versicolor</i> | 87. <i>Pterostichus luctuosus</i> |
| 43. <i>Bembidion wingatei</i> | 88. <i>Pterostichus patruelis</i> |
| 44. <i>Bradycellus lecontei</i> | 89. <i>Pterostichus pensylvanicus</i> |
| 45. <i>Bradycellus neglectus</i> | 90. <i>Pterostichus rostratus</i> |
| | 91. <i>Pterostichus stygicus</i> |

92. *Pterostichus tenius*
 93. *Pterostichus tristis*
 94. *Scaphinotus bilobus*
 95. *Scaphinotus viduus*
 96. *Sericoda quadripunctata*
 97. *Sphaerodeus stenostomus lecontei*
 98. *Stenolophus conjunctus*
 99. *Stenolophus fuliginosus*
 100. *Stenolophus ochropezus*
 101. *Synuchus impunctatus*
 102. *Tachyta nana inornata*
 103. *Trechus apicalis*
 104. *Trichocellus cognatus*

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THE MAINE CARABID BEETLE PROJECT

being conducted by

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Beetles of the family Carabidae (including the tiger beetles, sometimes placed in their own family, the Cicindelidae) are commonly known as ground beetles, and the family is one of the largest in the entire animal kingdom, with some 30,000+ described species known worldwide. [For comparison, there are about 8,000 species of birds known in the entire world.] In Maine, the family is exceptionally well-represented: in the past three years, we have been able to identify approximately 400 species known or very strongly suspected to be found within the state of Maine.

Unfortunately, a number of species are known from a very few specimens from a very few localities; some are only known from single specimens. In part, this reflects a rarity of some species with very exacting habitat requirements, but most of the apparent rarity is probably more a reflection of the general lack of adequate collecting of species not considered to be of economic significance.

Ecologically, many carabid beetles seem to be generalized predators and scavengers, but we actually know little of the natural food preferences of most species. Some, such as those of the genus *Calosoma*, are known to be important predators on pests - the members of this genus being commonly known as "caterpillar hunters." Some are found in extremely restricted habitats - e.g., inside beaver lodges, under bark on fallen trees in *Sphagnum* swamps and bogs, or in recently burned forests, etc., but *why* they're so restricted remains unknown.

The importance of knowing and understanding the ground beetle fauna of Maine is important for a number of reasons. First, knowledge of the species composition of the fauna can help in our understanding of the shifting complexity of the natural and disturbed ecosystems of the state. Second, since many species are very restricted with regards to habitat, they are potentially very good indicators of environmental change. Unlike trees, or animals that depend on particular kinds of vegetation for food or habitat, ground beetles are free to move out of habitats that become inhospitable - many are excellent fliers. With a number of species, the limits of known distribution are found in the state of Maine. Shifts in those distributions may be expected when climates change, and may in fact be the first detectable biological response to those climate changes.

Our efforts are focused on identifying the fauna and mapping, as accurately as possible, the distributional limits of ground beetle species in Maine, based on actual specimens in museums and other collections. Some parts of the state are fairly well-known, such as the central Kennebec River valley. Other areas, such as the upper Androscoggin and Penobscot basins, or Washington County, are much less well-collected. A few pockets within the state remain virtually unknown.