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FIRST RECORD OF THE PALEARCTIC SPECIES *OXYPODA OPACA* (GRAVENHORST) FROM NORTH AMERICA (COLEOPTERA: STAPHYLINIDAE: ALEOCHARINAE)

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Abstract.—*Oxypoda opaca* (Gravenhorst), a widespread Palearctic species, is reported for the first time from North America. The species is redescribed and diagnostic characters are provided to distinguish it from other *Oxypoda* species occurring in eastern North America. Distinguishing features are illustrated with line drawings and scanning electron photomicrographs.

During the past several years, the unsorted Staphylinidae in the collections of North Carolina State University, Clemson University and the University of Vermont have been submitted to me for identification. Specimens of a large, but previously unrecognized, species of *Oxypoda* Mannerheim were found periodically in this material. These were subsequently identified by the author as *Oxypoda opaca* (Gravenhorst), a species not previously reported from North America. Additional specimens have been found among the unidentified Aleocharinae in the collection of Cornell University, and only very recently have been collected by the author in New York State.

The purpose of this paper is to record the presence of this Palearctic aleocharine in eastern North America, to redescribe and illustrate the species, and to present diagnostic characteristics to allow identification of the adults.

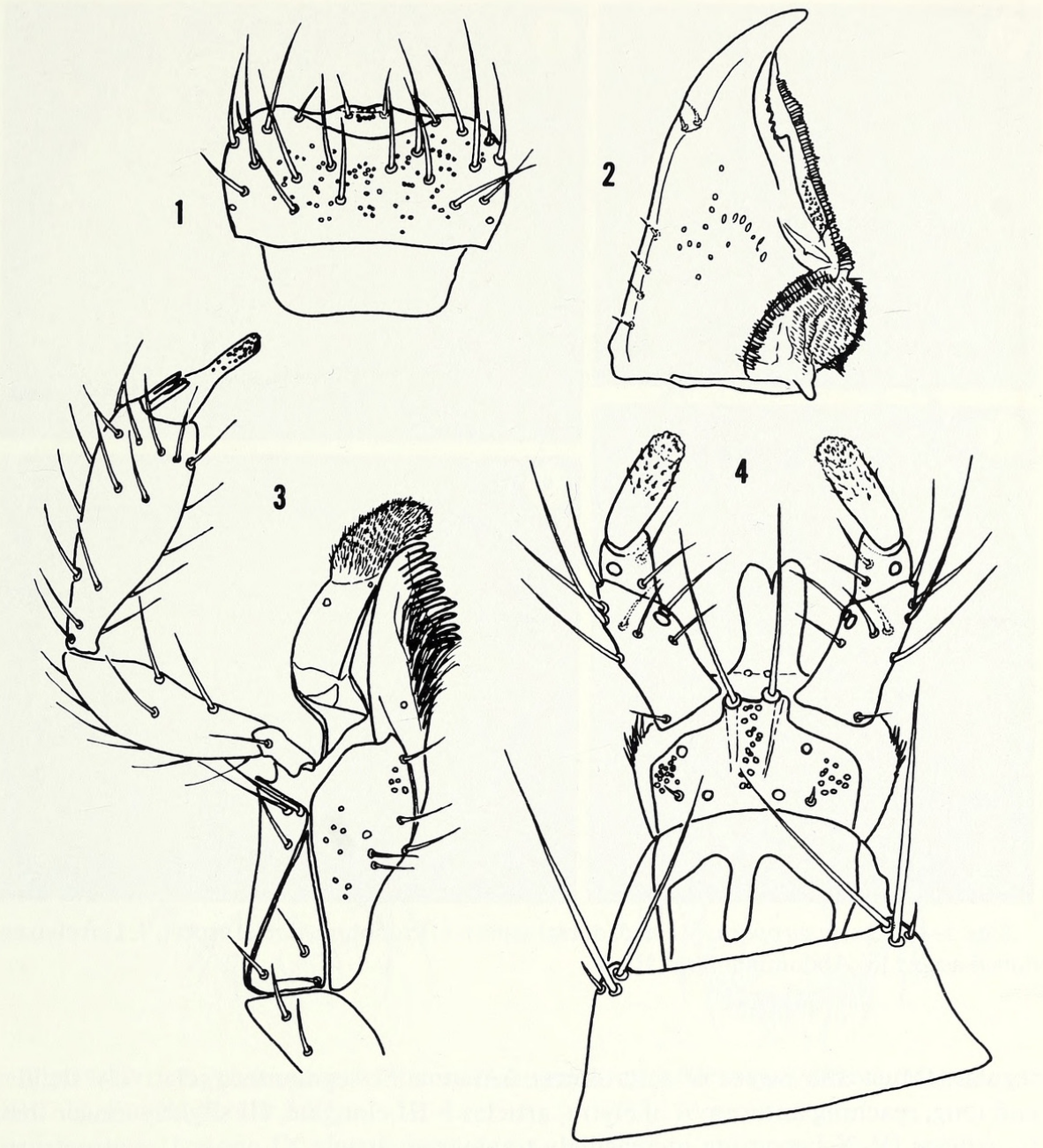
Oxypoda, a cosmopolitan and predominantly temperate genus, is represented in the world by more than 350 recorded species. In North America, few, if any, of the nearly 100 recognized species (Moore & Legner, 1975; Seevers, 1978) can be identified accurately since keys to species do not exist, and original descriptions and illustrations are inadequate to make precise determinations. North American *Oxypoda* have not been revised since the work of Casey (1893, 1906, 1911) who provided descriptions to the majority of the species (37 names in the East and 47 in the West). The remaining Nearctic species (12) have been named by Bernhauer (1905, 1907), Blatchley (1910), Erichson (1839), Mäklin (1853), Notman (1920) and Sachse (1852).

Members of *Oxypoda* can be recognized easily by the diagnostic combination of: strongly fusiform body shape; frontal suture present (though difficult to see); infraorbital carina sharply defined; hypomera not visible in lateral view; strong sinuation of outer, posterior margin of elytra; 5,5,5 tarsal formula; and first tarsomere of hind tarsus longer than tarsomeres II–IV combined.

Oxypoda opaca (Gravenhorst)

Aleochara opaca Gravenhorst, 1802:89.
Oxypoda opaca: Mannerheim, 1831:483.

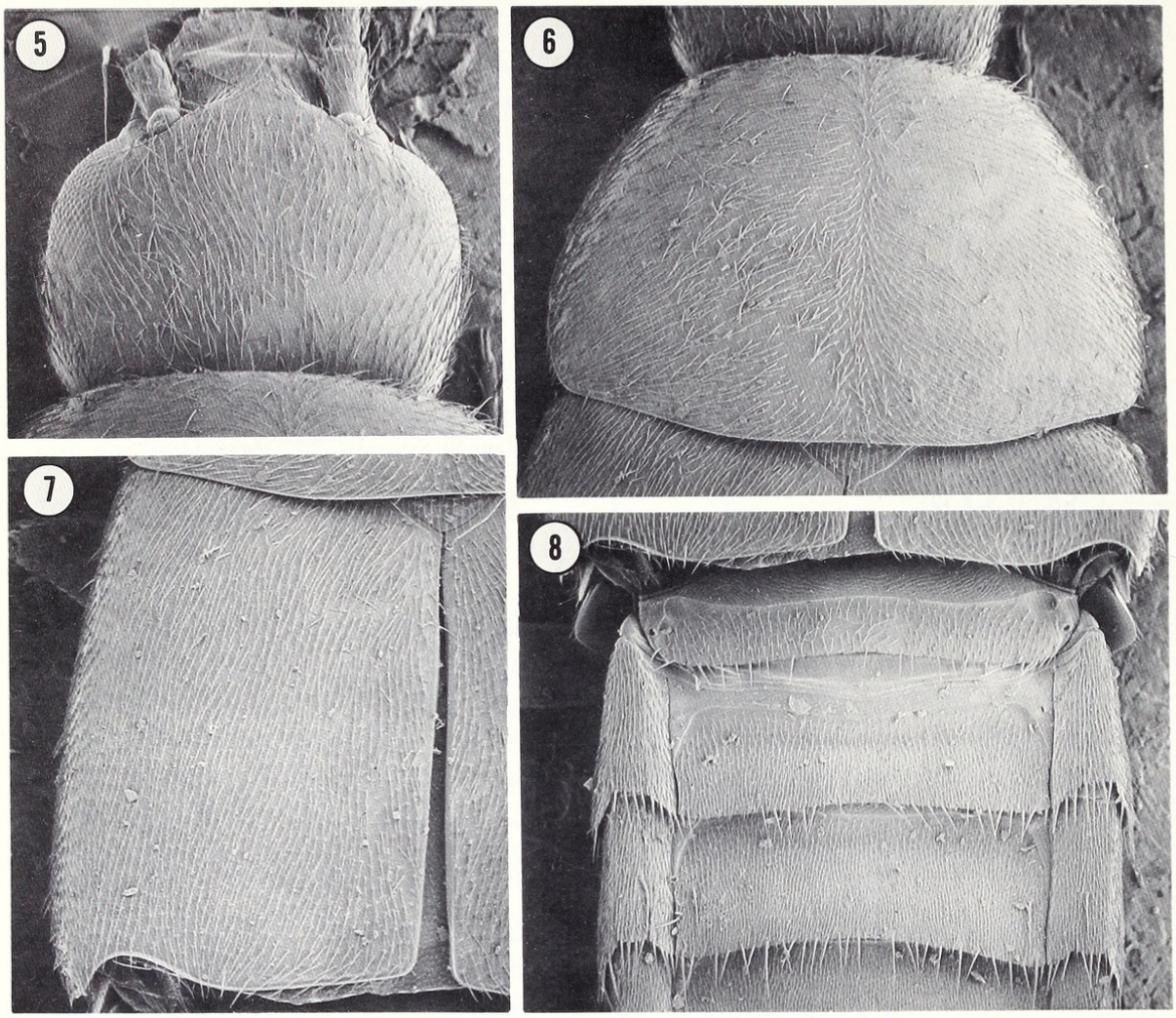
Redescription. Dark ferrugineous-brown; head, basal areas of elytra adjacent to scutellum, and basal impressions of abdominal terga III–V dark brown to piceous.



Figs. 1–4. *Oxypoda opaca*. 1. Labrum, dorsal aspect. 2. Right mandible, dorsal aspect. 3. Maxilla, dorsal aspect. 4. Labium, ventral aspect (setae of disc of mentum, except for 3 major setae near antero-lateral angles, not included in illustration).

Paratergites, apical ½–⅓ of terga III–VII and apical ⅓ of sterna III–VII somewhat paler, rufobrunneous. Basal 3 antennal articles, mouthparts, and legs rufotestaceous. Length 3.5–4.5 mm.

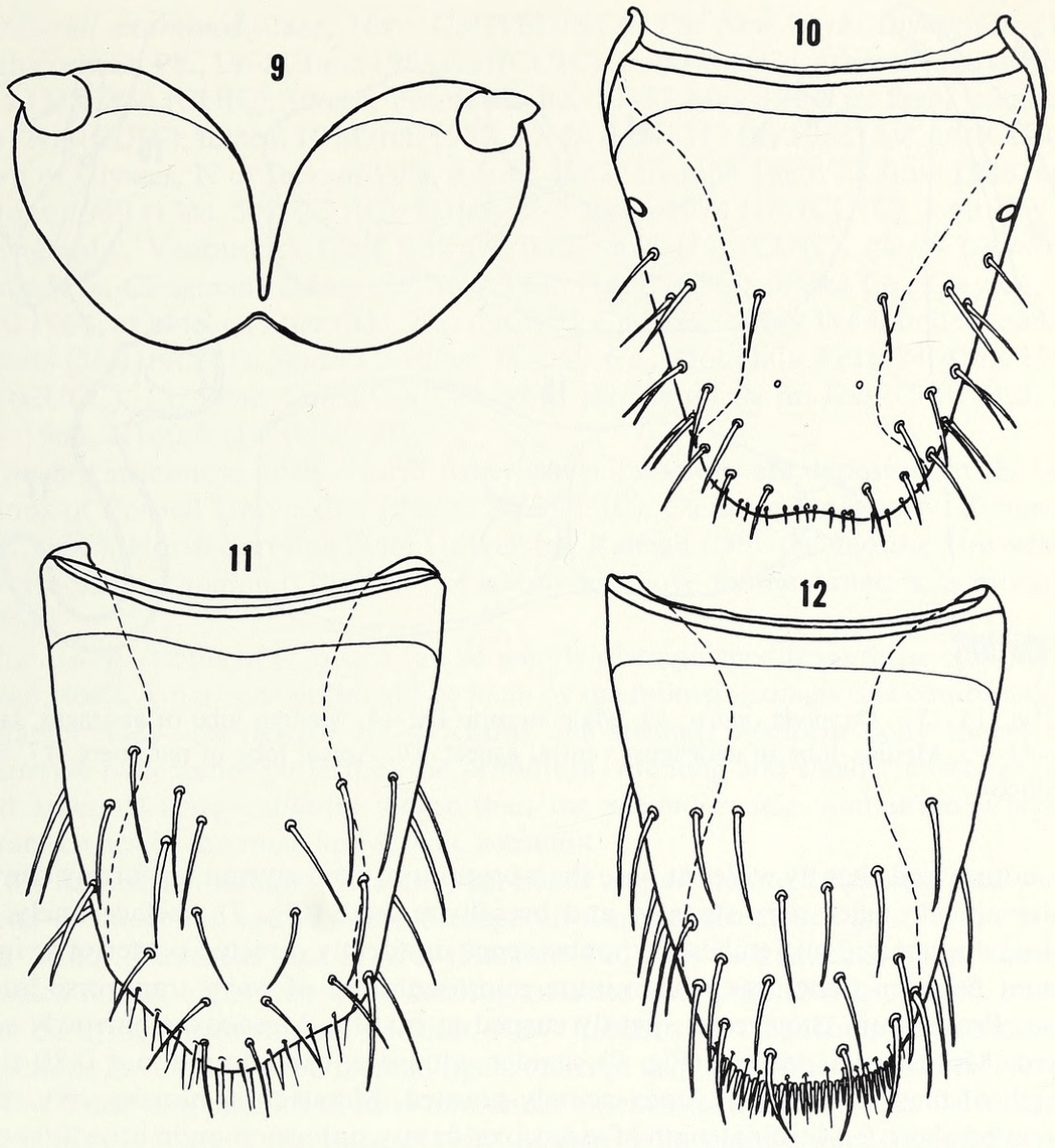
HEAD. Suborbicular, partially concealed by prothorax (Fig. 5). Eyes moderately large, slightly longer than length of temples; temples sharply margined below by infraorbital carina; dorsal surface densely and finely punctured and pubescent; pubescence (Fig. 5) subappressed, uniformly distributed, directed more or less anteriorly in most specimens; surface between punctures with obsolete microsculpture of ir-



Figs. 5–8. *Oxypoda opaca*. 5. Head, dorsal aspect. 6. Pronotum, dorsal aspect. 7. Left elytron, dorsal aspect. 8. Abdominal terga III–V.

regular, transverse waves of microlines. Antenna 11-segmented, relatively slender and long, reaching anterior ⅓ of elytra; articles I–III elongate, III slightly longer than II; articles IV–X becoming increasingly transverse; article XI conical, symmetrical, pointed apically, as long as or longer than IX + X combined.

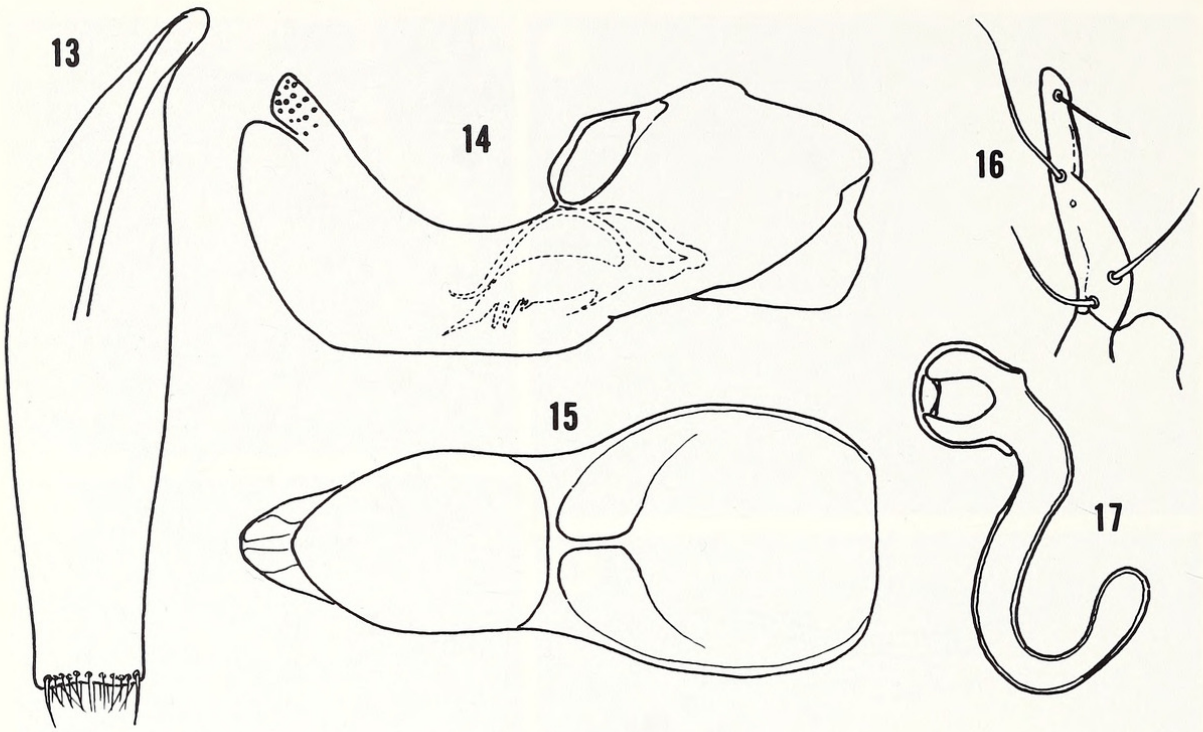
MOUTHPARTS. Labrum as in Figure 1. Right mandible (Fig. 2) with small tooth at middle of inner margin, indistinctly crenulate before tooth; tooth absent from left mandible; ventral (condylar side) and dorsal (abcondylar side) molar regions smooth, without rows of denticles. Maxilla (Fig. 3) with galea slightly longer than lacinia; lacinia with compact row of large, somewhat recurved teeth on apical portion of inner surface, and patch of condensed spines and setae more basally; distal lobe of galea with compact patch of fine setae; maxillary palpus 4-segmented. Labium as in Figure 4; palpus 3-segmented, relatively slender, segment 1 longest, about equal in length to segments 2–3 combined; ligula broad, about as long as labial palpal segment 1, shallowly bifid at apex, with 2 distinct pore-like structures at base; medial setae 2, bases moderately separated; longitudinal pseudopore field narrow, with many (approx. 15–20) large, closely spaced pseudopores forming a narrow longitudinal



Figs. 9–12. *Oxypoda opaca*. 9. Mesosternal process. 10. Male tergite VIII. 11. Male sternite VIII. 12. Female sternite VIII.

band; lateral fields with approximately 8–10 clumped pseudopores, 2 real pores and 1 setose pore distributed as in Figure 4.

THORAX. Pronotum (Fig. 6) more or less transverse (L/W ratio = 0.71), about 1.4 times as wide as long; strongly convex in lateral view; anterior margin shallowly emarginate; antero-lateral angles sharply rounded and distinct; sides broadly rounded, broadest at base; posterior angles more broadly rounded; posterior margin broadly arcuate, with latero-posterior margin slightly sinuate in some specimens; hypomera not visible in lateral view; punctures and pubescence of dorsum dense, moderately coarse and uniformly distributed; pubescence (Fig. 6) along median line directed posteriorly in lower ⅔ and directed anteriorly in anterior ⅓, other pubsecence swirling laterally from median row [=Type III of Lohse, 1974 (Fig. 188, pg. 125)]; surface microsculpture similar to that of head. Elytra (Fig. 7) about 1.2 times as long as



Figs. 13–17. *Oxypoda opaca*. 13. Male sternite IX. 14. Median lobe of aedeagus, lateral aspect. 15. Median lobe of aedeagus, ventral aspect. 16. Apical lobe of paramere. 17. Spermatheca.

pronotum and slightly wider at base than pronotum; each elytron uniformly convex; outer apical angles very strongly and broadly sinuate (Fig. 7); surface finely, but densely punctured and pubescent; pubescence uniformly directed posteriorly; integument between punctures with minute microsculpture of wavy transverse microlines. Prosternum transverse, slightly cusped at middle. Mesocoxae narrowly separated. Mesosternal process (Fig. 9) slender, elongate, extending about 0.80 times length of mesocoxal cavity, apex acutely pointed. Metasternal process very short, extended about 0.14 times length of mesocoxal cavity, anterior margin broadly rounded, margin defined by distinct bead. Mesocoxal acetabulae margined posteriorly by distinct carina. Ratio of mesosternal process : isthmus : metasternal process, 9.1:1:1.7. Tarsi 5,5,5 segmented, long and slender; first tarsomere long, slightly longer than articles II–IV combined.

ABDOMEN. Abdomen (Fig. 8) tapered to apex, broad at base; first 3 visible tergites transversely impressed at base. Integument of abdomen with reticulate microsculpture. Apical margin of tergum VIII (males and females) shallowly emarginate at middle as in Figure 10.

MALE. Sternum IX as in Figure 13. Median lobe of aedeagus as in Figures 14–15. Apical lobe of paramerite as in Figure 16.

FEMALE. Spermatheca as in Figure 17.

Secondary sexual characteristics. Males: Apical margin of sternum VIII produced at middle (Fig. 11). Antennal article XI elongate, slightly longer than articles IX + X combined. Females: Apical margin of sternum VIII broadly rounded and with numerous close-set setulae (Fig. 12). Antennal article XI subequal in length to articles IX + X combined.

Material examined. 28♂♂, 16♀♀. UNITED STATES: *New York: Livingston Co.,* Letchworth St. Pk., 19–21 June 1981 (1♀) (CUIC). *Tompkins Co.,* Ithaca, 1 November 1985 (3♂♂, 2♀♀) (CUIC); Ithaca, Forest Home, 10–17 May 1981, ex flight intercept trap (2♀♀) (CUIC); Ithaca, 10 March 1977, 17–24 & 24–31 May 1981 (2♂♂, 1♀) (CUIC); Town of Ulysses, N of Jacksonville, 6 June 1982, 15 June 1985, 22 June 1988, and 11 June 1989 (13♂♂, 5♀♀) (CUIC); Danby, 2–3 April 1974 (1♂) (CUIC); 2 mi NW of West Danby, Vanbuskirk Gulf Rd., 29 June 1975 (1♀) (CUIC). *North Carolina: Swaine Co.,* Clingmans Dome, 28 May 1936 (1♂) (NCSU). *Wake Co.,* Clayton, 24 April 1964, ex chicken litter (3♂♂, 2♀♀) (NCSU); Clayton, 7 May 1964, under chicken feathers (5♂♂) (NCSU). *South Carolina: Oconee Co.,* Mountain Rest, 24 April 1954 (1♀) (CUCC). *Vermont: Caledonia Co.,* Saint Johnsbury, ¾ mi E of Crow Hill, 30 May 1966, 1,140 ft (1♀) (UVCC).

Voucher specimens of the North American populations are deposited in the collections of Cornell University, Ithaca, NY (CUIC); Clemson University, Clemson, SC (CUCC); North Carolina State University, Raleigh (NSUC); and the University of Vermont, Burlington (UVCC). The acronyms above follow Arnett & Samuelson (1986).

Discussion. Adults of *O. opaca* can be readily distinguished from those of all other known North American species of *Oxypoda* by the following diagnostic combination: the larger body size (length 3.5–4.5 mm), the strongly fusiform body shape, the distinctive pubescence pattern of the pronotum, the long and slender antennae, the third antennal article slightly longer than the second article, and the distinctive characteristics of the male and female genitalia.

This Palearctic (perhaps Holarctic) species is one of the most common and widespread of the genus and is found throughout Europe, Great Britain, North Africa, Asia Minor, Caucasus and Siberia (Horion, 1967). It is frequently found among haystack refuse, under vegetable detritus, in moss and fungi (Fowler, 1888), and in other decaying organic matter (Horion, 1967; Lohse, 1974). Specimens at hand from collections have been taken from a flight intercept trap and under an animal carcass in New York, and in chicken litter and under chicken feathers in North Carolina. In Tompkins Co., New York, in June 1989, numerous specimens were collected by the author beneath a very decayed pile of grass clippings.

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LITERATURE CITED

Arnett, R. H., Jr. and G. A. Samuelson. 1986. The Insect and Spider Collections of the World. E. J. Brill/Flora & Fauna Publications, Gainesville, Florida, 220 pp.

Bernhauer, M. 1905. Neue Aleocharinen aus Nordamerika. Deutsche Entomol. Z. 1905:249–256.

Bernhauer, M. 1907. Neue Aleocharini aus Nordamerika. (Col.) (3. Stuck.). Deutsche Entomol. Z. 1907:381–405.

Blatchley, W. S. 1910. Aleocharinae. Pages 332–367 *in:* The Coleoptera or beetles (exclusive of the Rhynchophora) known to occur in Indiana with bibliography and description of new species. Indiana Dept. Geol. and Natur. Res. Bull. 1.

Casey, T. L. 1893. Coleopterological notices. V. Ann. N.Y. Acad. Sci. 7:281–606.

Casey, T. L. 1906. Observations on the staphylinid groups Aleocharinae and Xantholinini, chiefly of America. Trans. Acad. Sci. St. Louis 16:125–434.

Casey, T. L. 1911. New American species of Aleocharinae and Myllaeninae. Mem. Col. 2:1–245.

Erichson, W. F. 1839. Genera et species staphylinorum insectorum coleopterorum familiae, Pt. 1. Berlin, pp. 1–400.

Fowler, W. W. 1888. The Coleoptera of the British Islands. A Descriptive Account of the Families, Genera and Species Indigenous to Great Britain and Ireland, with Notes as to Localities, Habitats, etc. Vol. 2. Staphylinidae. L. Reeve & Co., London, 444 pp.

Gravenhorst, J. L. C. 1802. Coleoptera microptera Brunsvicensia nec non exoticorum quotquot exstant in collectionibus entomologorum Brunsvicensium in genera familias et species distribut. Brunsvigae, 206 pp.

Horion, A. 1967. Faunistik der Mitteleuropäischen Käfer. Bd. XI: Staphylinidae. 3. Teil: Habrocerinae bis Aleocharinae. 419 pp.

Lohse, G. A. 1974. Aleocharinae, tribus 1–13 (Deinopsini-Falagriini). Pages 22–72 *in:* A. Freude, K. W. Harde and G. A. Lohse (eds.), Die Käfer Mitteleuropas, 5. Goeke & Evers, Krefeld.

Mäklin, F. G. 1853. [Description of new taxa]. Pages 95–273 *in:* C. G. Mannerheim, Dritter Nachtrag der Kaefer-Fauna der Nord-Amerikanischen Laender der Russichen Reiches. Bull. Soc. Imp. Nat. Moscou 26.

Mannerheim, C. G. 1831. Precis d'un nouvel arrangement de la famille des brachélytres de l'ordre des insectes coléoptères. Mem. Acad. Imp. Sci. St.-Peterbourg. Vol. 1 (Mem. Sav. Etrangers), pp. 415–501.

Moore, I. and E. F. Legner. 1975. A Catalogue of the Staphylinidae of America North of Mexico (Coleoptera). Div. Agric. Sci., Univ. Calif., Special Publ. 3015. 514 pp.

Notman, H. 1920. Coleoptera collected at Windsor, Broome Co., N.Y., 26 May to 5 June, 1918, with notes and descriptions. Jour. N.Y. Entomol. Soc. 28:178–194.

Sachse, C. T. 1852. Neue Käfer. Stettiner Entomol. Z. 13:115–127, 142–149.

Seevers, C. H. 1978. A generic and tribal revision of the North American Aleocharinae (Coleoptera, Staphylinidae). Fieldiana: Zool. 71:1–289.

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