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DOLICHODERUS TASCHENBERGI MAYR (HYMENOPTERA: FORMICIDAE) FROM AN EARLY HOLOCENE FOSSIL INSECT ASSEMBLAGE IN THE COLORADO FRONT RANGE

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A paleoenvironmental study of Holocene (Post-glacial) age sites in the Front Range of the Colorado Rocky Mountains was begun in 1981, with the excavation of organic detrital sediments from a deltaic deposit at the point where South St. Vrain Creek enters Lake Isabelle (Fig. 1). The study site lies in the ecotone between the subalpine forest and alpine tundra, and the insect faunal assemblages from the site consistently reflect past environments that fall within the same zone. Sediments ranging in age from 9000 to 7900 years before present (yr. BP) were analyzed for insect fossils, and yielded a total of 138 taxa, dominated by Coleoptera (Elias, 1985). A head capsule of a gynomorph of the ant *Dolichoderus taschenbergi* Mayr was recovered from an interval correlated with a radiocarbon age of 7900 yr. BP (Fig. 2). Other ant taxa from this time interval include *Camponotus* cf. *herculeanus* L., *Formica neorufibarbis* Emery and *Myrmica* sp., all of which may be found in the forest-tundra ecotonal regions of the Front Range today. In general, fossil insect assemblages from this and other high altitude sites in the Colorado Rockies suggest that the time interval associated with these ant fossils falls approximately in the middle of a two thousand year climatic optimum, in which altitudinal tree limit was at least as high as it is today (Elias, 1983, 1985).

The recovered fossil head capsule of *Dolichoderus* agrees obviously with recent specimens of *taschenbergi* Mayr (Fig. 3.). Such characters as the habitus of the capsule, the position, size and shape of the eyes, the diverging and widely separated frontal carinae, the flanges overhanging in part the antennal sockets, the sinuous anterior margin of clypeus, the absence of sculpture on the

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