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SCIENTIFIC NOTE

**EXTANT! LIVING *BEMBIDION PALOSVERDES* KAVANAUGH AND ERWIN
(COLEOPTERA: CARABIDAE) FOUND ON SANTA CATALINA ISLAND, CALIFORNIA**

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Kavanaugh and Erwin (1992) described *Bembidion palosverdes* from seven specimens from two localities on the Palos Verdes Peninsula, Los Angeles Co., CA (Pt. Vicente, ~33.741°N, 118.411°W, and Pt. Fermin, ~33.705°N, 118.294°W), collected in June 1964 by Derham Giuliani. The species' authors spent two days searching for specimens at the two known localities, but found no additional specimens. They suggested that the species may have become

extinct prior to its formal description, citing a major 1969 oil spill as a potential factor.

On 30 January 2010, MSC and KJC were investigating the intertidal zone of Santa Catalina Island (Little Harbor, 33.3837°N, 118.4733°W; Fig. 1A), approximately 43 km SSW over open ocean from the type locality, where they found two specimens of intertidal *Bembidion* Latrielle (Fig. 1B). These were initially thought to be *Bembidion laticeps*

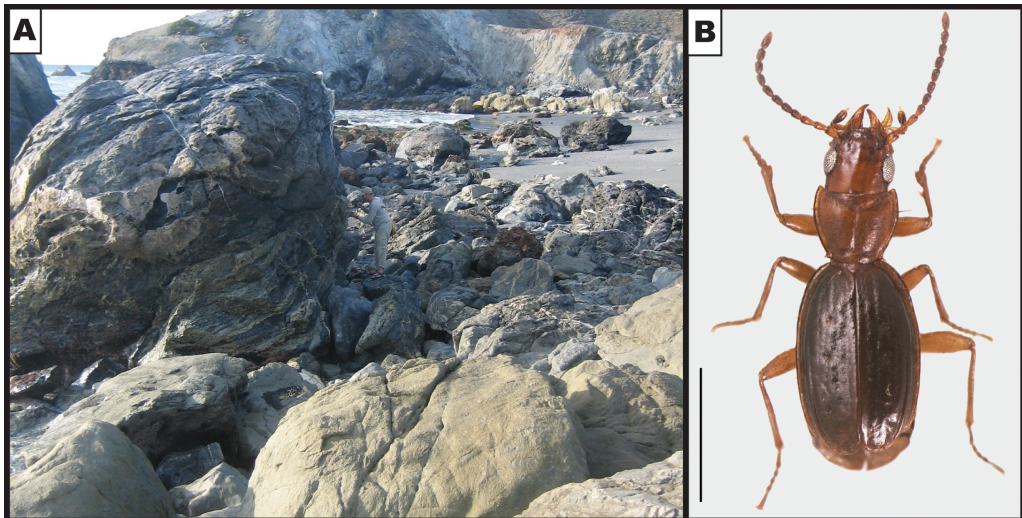


Fig. 1. A) Rocky intertidal zone at the collecting site of *Bembidion palosverdes* on Santa Catalina Island, B) *B. palosverdes* from Santa Catalina Island [SBMNH-CBP0100948; scale bar = 1mm].

(LeConte), which had been recently collected several times in similar situations. However, close comparison of the specimens' external features to those illustrated in the original description of *B. palosverdes* suggested that it might be the latter species. Recent confirmation by the third author, in part by examination of the genitalia of a captured male, allow us to report happily that the species remains extant, although perhaps not at the type locality.

Although the beetle fauna of the rocky intertidal zone is sparse, there are a number of highly specialized and generally rare species restricted to this niche on the west coast of North America, principally Staphylinidae but also Carabidae, Melyridae, Ptiliidae, Hydraenidae, and Salpingidae (Doyen 1976; Moore and Legner 1976). Part of their rarity in collections may have to do with quite specialized techniques necessary to effectively collect them. At this and other localities, rocky intertidal beetles such as *B. laticeps*, *Motschulskium sinuaticolle* Matthews (Ptiliidae), *Neochthebius vandykei* (Knisch) (Hydraenidae), *Endeodes* spp. (Melyridae), *Cercyon* spp. (Hydrophilidae), and assorted Aleocharinae (Staphylinidae) have been collected by splitting intertidal rocks with a chisel along fracture planes, as described by Hicks (1990), with beetles, other microarthropods, and worms frequently abundant in the crevices. The greatest diversity and abundance were found just below the high tide line.

Finding that *B. palosverdes* persists on Santa Catalina, one of eight California Channel Islands, is highly significant. These little-developed islands provide relatively intact instances of otherwise highly impacted coastal southern Californian habitats and constitute important refugia for numerous species

of beetles, insects, and other animals that have now become rare or extirpated on the mainland. The rediscovery on Santa Catalina Island of a species previously suggested to be extinct offers a particularly strong case in point.

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