



FIGURE 7—*Cambroinyoella wallacei* n. sp. *Fallotaspis* zone, Early Cambrian, Montenegro Member, Campito Formation, White-Inyo Range, Inyo County, California. 1, LACMIP locality number 26748, nearly complete holotype individual, dorsal view, LACMIP 26748, $\times 2.7$; 2, LACMIP locality number 6823, LACMIP 26823, $\times 3.1$.

length; extraocular area opposite L1 broad, width (tr.) approximately 125 percent width of glabella at L1. Medial part of posterior border between L0 and intergenal angle flexes posteriorly.

Approximately 16–19 thoracic segments. Anteromedian margin of third thoracic pleural segment transverse; third thoracic segment macropleural; anterior margin of thoracic pleural furrow on third segment directed weakly posteriorly; thoracic pleural spines on segments 5–8 developed as short projections extending approximately three thoracic segments back; thoracic pleural furrows extend roughly entire width of inner pleural region.

Etymology.—Named for Alfred Russell Wallace.

Type.—Holotype LACMIP 26748 (Fig. 7.1), from Early Cambrian, White-Inyo Range, Inyo Co., California: LACMIP locality 6748, *Fallotaspis* zone, Montenegro Mbr., Campito Fm.

Other material examined.—LACMIP 7365, 7370, 26748 (6 specimens), 26749 (3 specimens), 26823.

Occurrence.—Early Cambrian, White-Inyo Range, Inyo Co., California, *Fallotaspis* zone, Montenegro Mbr., Campito Fm.: LACMIP localities: 6749, Blanco Mtn. USGS quad. (1952), SE1/4, NE1/4, sec. 13, T6S, R35E, on small hill just south of east-west road leading to Silver Canyon; and 6823, Waucoba Sp. USGS quad. (1958), SE1/4, SE1/4, sec. 4, T11S, R37E, in small gully just southeast of 6,640 ft closed contour at 6,560 ft elevation.

Genus GABRIELLUS Fritz, 1992

GABRIELLUS sp.

Figure 8

Olenelloid gen. et sp. ind. WHITTINGTON, 1989, p. 134, fig. 26, and pl. 4, figs. 21, 22; FRITZ, 1992, p. 20.

Gabriellus sp. PALMER AND REPINA, 1993, p. 20, fig. 4.9; PALMER AND REPINA, 1997, p. 412, fig. 259.3.

Material examined.—ROM 43014, 48518.

Discussion.—The specimen figured herein appears to be distinct from the type of the genus *Gabriellus*, *G. lanceatus* Fritz, 1992 because it differs from that species in the condition of several characters including: in *G. sp.* the frontal lobe (LA) more prominently contacts the anterior border furrow; the glabellar furrows are less prominently incised in *G. sp.*; the ocular lobes are relatively longer (exsag.) in *G. sp.*; in *G. sp.* the intergenal angle is much larger; *G. sp.* has a relatively broader (tr.) thoracic pleural field; in *G. sp.* the pleural spines are relatively longer; and in *G.*

sp. the relative width (tr.) of the thoracic pleural spines at their midpoint is relatively greater. Fritz (1992, p. 26 and personal commun., 1998) indicated that he was in the process of describing and naming this new species. For this reason, I have only illustrated the material and neither described nor diagnosed it. However, character states typical of this species are given above and in Table 1. As discussed in the introduction, based on phylogenetic analysis the genus *Gabriellus* appears to be sister to the Olenelloidea.

Iyoella contracta Geyer and Palmer, 1995, from the Early Cambrian Issafen Formation of Morocco is very poorly preserved such that its phylogenetic relationships could not be evaluated at this time. However, it bears some similarity to species of *Gabriellus* and these two genera may be closely related. In particular, in both *Iyoella* and *Gabriellus* the frontal lobe of the glabella (LA) contacts the anterior border furrow, the length (sag.) of LA is equal to roughly the length (sag.) of L0 and L1, the lateral margins of the glabella between L0 and L2 are convergent, S2 and S3 are jaggedly convex, L2 and L3 do not merge distally, S1 is not conjoined medially, and there is a prominently developed intergenal spine,

Genus CALLAVIA Matthew, 1897

Type species.—*Olenellus (Mesonacis) bröggeri* Walcott, 1890, the first name under which the species was described.

Included species.—None (monotypic).

Discussion.—*Callavia crosbyi* Walcott, 1910, was originally described from North Weymouth, Massachusetts, and treated as extremely similar to *C. broeggeri*, a species originally known from the Avalonian terrane in eastern Newfoundland. However, Walcott (1910) suggested that there were in fact a few differences between the two species including: the presence of a narrow, clearly defined ridge about the frontal lobe in *C. crosbyi*; a stronger, broader pleural furrow in *C. crosbyi*; and a stronger posterior marginal border in *C. crosbyi*. Based on examination of the type series of *C. crosbyi* figured by Walcott (1910, pl. 28, figs. 1–8), examination of other identical material from North Weymouth that was figured by Grabau (1900), as well as examination of the type material of *C. broeggeri*, it would appear that none of the characters listed above actually differ in these taxa. Instead, these taxa appear to be morphologically indistinguishable, with *C. crosbyi* being a junior subjective synonym of *C. broeggeri*, and they are therefore treated as conspecific.