Mountains and Spring Mountains, Nye County, Nevada (LACMNH locs. 17130, 17131); southern Nopah Range, Inyo County, California (LACMNH loc. 17132). Specimens have also been seen in the lower Wood Canyon Formation in the Resting Spring Mountains, northern Nopah Range, and Funeral Mountains of Inyo County, California.

Discussion.—The truncated shape, tapering of individual tube segments, lack of evidence for backfill or sediment disturbance, high densities within amalgamated beds, and absence of self-intersection suggest that our fossils are molds and casts of smooth-walled and annulated tubes, rather than trace fossils or compressed algal or bacterial sheaths. Unlike traces from coeval beds which are concentrated on bed tops and bottoms, tubes occur throughout fossiliferous beds in the study areas. In rare horizons, tubes can occur as densely packed monotaxic fossil concentrations. Furthermore, tubes are inclined at oblique angles to bedding and pass through bed interfaces—features unknown from Neoproterozoic trace fossils, which are typically bed-parallel in orientation. The dimensions of these tubes are within the known limits for *Cloudina*; *C. hartmannae* from Namibia, for instance, ranges from 2 to 6.5 mm in diameter and from 8 to 150 mm in length, whereas *C. riemkeae* ranges from 0.3 to 1.7 mm in diameter (Germs, 1972). Because the annulated and smooth tube types co-occur and have similar diameters, tapering, and degrees of curvature, we tentatively consider them to be preservational variants of the same or closely related organisms. McMenamin (1985) noted a similar intergradation between annulated and smooth-walled tubes from the latest Precambrian of Mexico, and Grant (1990) cited a similar intergradation in Chinese material; both attributed it to different degrees of predepositional abrasion.

Precise identification, however, is made difficult by the fossils' preservation as molds or casts in fine-grained siliciclastic rocks. *Cloudina* has usually been described from thin sections in carbonates and/or whole specimens dissolved from carbonates. Since our fossils lack original wall material, close comparisons with typical cloudiniids are not possible; we cannot confirm the presence of the "cone-in-cone" wall structure of true *Cloudina.* Furthermore, several other genera have been erected for similar fossils from this region: *Nevadatubulus* and *Sinotubulites* have previously been used for annulated tubes from Precambrian-Cambrian boundary strata in the White-Inyo Mountains and in Mexico (e.g., McMenamin, 1985; Signor et al., 1987). Both genera have been synonymized with *Cloudina* by Grant (1990), but this has not been tested or verified in the type area. Langille (1974b) also described some smooth-walled, tubular forms as *Terebellites*? from the Death Valley region. It is possible that these are identical to our smooth-walled tubes and thus likely preservational variants of cloudiniids, but reexamination of Langille's material is needed.

Salak and Lescinsky (1999) have described an enigmatic fossil, *Spygoria zappania,* from the Lower Cambrian of central Nevada. *Spygoria* closely resembles cloudiniids but differs in having shallow cup-shaped nested laminae, rather than the conical laminae of typical *Cloudina.* Without knowledge of the wall structure of our material, we cannot rule out an affinity with *Spygoria* for our material. However, *S. zappania* ranges from 2–10 mm in diameter, with a typical diameter of about 6 mm; it is therefore larger than all but the largest of our specimens. Its surface morphology is also less regular than that of our specimens. We provisionally rule out an affinity with *Spygoria* for our material.

Genus CORUMBELLA Hahn, Hahn, Leonardos, Pflug, and Walde, 1982

Type species.—*Corumbella werneri* Hahn, Hahn, Leonardos, Pflug, and Walde, 1982.

Emended diagnosis.—Annulated tubular fossils less than five millimeters in diameter, with fourfold radial symmetry.

CORUMBELLA new species A
Figure 5.4–5.6

Description.—Annulated tubular fossil, nearly square with rounded corners in cross section, with a diameter of 4 mm on the longest diagonal. Sharp separation between interior and exterior of fossil probably representing thin wall. Longitudinal grooves along the midline of each face. Best-preserved specimen (LACMNH 12802) shows helical twist along main axis. Interior of best specimen filled with siliciclastic sediment (grain diameter ~100–500 μm), significantly coarser than surrounding sediment (grain diameter ~10–60 μm).

Material.—Two specimens, one with part and counterpart (LACMNH 12802), one with counterpart mold only (not figured).

Occurrence.—Lower Wood Canyon Formation, Montgomery Mountains, Nye County, Nevada (LACMNH loc. 17130).

Discussion.—In size and surface ornament, this fossil is closest to the specimens we describe as cf. *Cloudina.* However, it is larger than the *Cloudina*-like fossils from the same locality, and the fossil's helical twist and nearly square cross section make it quite distinct from all other tubular fossils from this region. This fossil is most similar to *Corumbella,* an annulated, tetraradially symmetrical tube from the late Proterozoic of southwestern Brazil. (Hahn et al., 1982). We do not consider it conspecific with the only described species, *C. werneri,* which lacks a helical twist, has finer transverse ornament, and was reconstructed as nearly circular in cross section. The available material also lacks the secondarily branched "polypar" described for *C. werneri.* It is even possible that it belongs in a different genus, but more material is needed to characterize the Nevada form. Until more examples have been found, we prefer to ally this form with the established genus *Corumbella* without formally erecting a new species.

Hahn et al. (1982) interpreted *Corumbella* as a tube built by the polyp stage of a scyphozoan, in analogy with a few living scyphozoans such as *Stephanoscyphus.* This fossil's symmetry and ornamentation are also similar to the Paleozoic conulariids, which may also be scyphozoans (Van Iten et al., 1996). This fossil provides strong evidence for the presence of scyphozoan-like cnidarians in the latest Proterozoic.

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FIGURE 3—Ediacara-type fossils from the southwestern Great Basin. All specimens are from the lower member of the Wood Canyon Formation near Johnnie, Nye County, Nevada (LACMNH loc. 17130) unless otherwise specified. *1–3, Nimbia* sp., LACMNH loc. 17129, in negative epirelief on large block of Stirling Quartzite; *1,* view of block in situ, ×0.2 (scale bar is 8 cm long). *2,* closeup of three specimens, ×0.5 (cast of these specimens curated as LACMNH specimen 12790). *3,* side view of naturally broken specimen, ×0.5 (cast of this and neighboring specimens curated as LACMNH specimen 12791); note absence of concretionary or fluid escape structures. *4, Nimbia*? sp., LACMNH 12792, loc. 17133, ×1. *5, 6,* cf. *Archaeichnium,* LACMNH 12794 (in hyporelief); *5,* close-up of broad end, showing transverse ornament and light, fine longitudinal lines, and cross-section through tube wall, ×2.5; *6,* view of complete specimen, ×1. *7, 8, 9,* cf. *Cloudina* sp., ridged type; *7,* LACMNH 12795 (in hyporelief), ×1; *8,* LACMNH 12796, ×1.2; *9,* LACMNH 12797, ×1. *10,* cf. *Cloudina* sp., smooth type, LACMNH 12798, loc. 17131, ×1.