

# Acknowledgments

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shows discrepancies within the data set used and with the zonation of Sanfilippo & Riedel (1985); only the ranges of specific taxa documented by Schaaf (1985) are considered here. Biozonal data extracted from these studies, and others (particularly Taketani 1982, Baumgartner 1984, Yao 1984, Aita 1987; Thurow 1988 and Blome 1992), does, however, help in assigning an age to the Windalia Radiolarite based on radiolaria. Well-documented, biostratigraphically diagnostic taxa include *A. diaphorogona*, *A. ultima*, *G. cephalocrypta*, *H. barbui barbui*, *Pseudodictyomitra lodogaensis* PESSAGNO, *S. renillaeformis*, *T. antiqua* and *Xitus vermiculatus* (RENZ) whose concurrent ranges suggest an age of Late Aptian to Early Albian, equivalent to the lower part of the *A. umbilicata* Zone of Sanfilippo & Riedel (1985). Many of the above species, and including *Archaeospongoprimum carrierensis* PESSAGNO, *Archaeodictyomitra sliteri* PESSAGNO, *A. vulgaris* PESSAGNO, *C. messinae*, *Napora dumitricai* and *N. durhami*, are all common in the *Kozorium zinguli* Zone (Zone 7) of Pessagno (1977a) and suggest only Early Albian time is represented. However, Pessagno (1977a, p. 18) expressed uncertainty with his positioning of the Aptian-Albian boundary in the California Coast Ranges sequence. It is probable that many of these species have ranges extending into the Late Aptian, as seems to be the case at Windalia Hill.

Specific identification of the radiolaria from the Windalia Radiolarite conforms with the original descriptions. Although variations do exist (see remarks for each taxon in the systematic section), placement of such taxa is considered acceptable either due to assumed intraspecific variation or that the original descriptions are sufficiently broad to allow incorporation. Many other forms are either only tentatively compared or left under open nomenclature because of large discrepancies in the ages of similar known species. The Late (latest) Aptian-Early Albian age for the Windalia Radiolarite also indicates that the published ranges of many radiolaria need revision, including *Archaeocenosphaera boria* PESSAGNO, *Mesosaturnalis hueyi* group (PESSAGNO), *Orbiculiforma depressa* WU, *O. mclaughlini* PESSAGNO, *Praeconocaryomma lipmanae* PESSAGNO, *P. prisca* PESSAGNO. These points highlight the current lack of detailed knowledge of many radiolaria in the early to middle Cretaceous, and, in particular, the difficulties in applying biozonations based on low-latitude radiolarian assemblages to the medium and high-latitude Austral region.

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