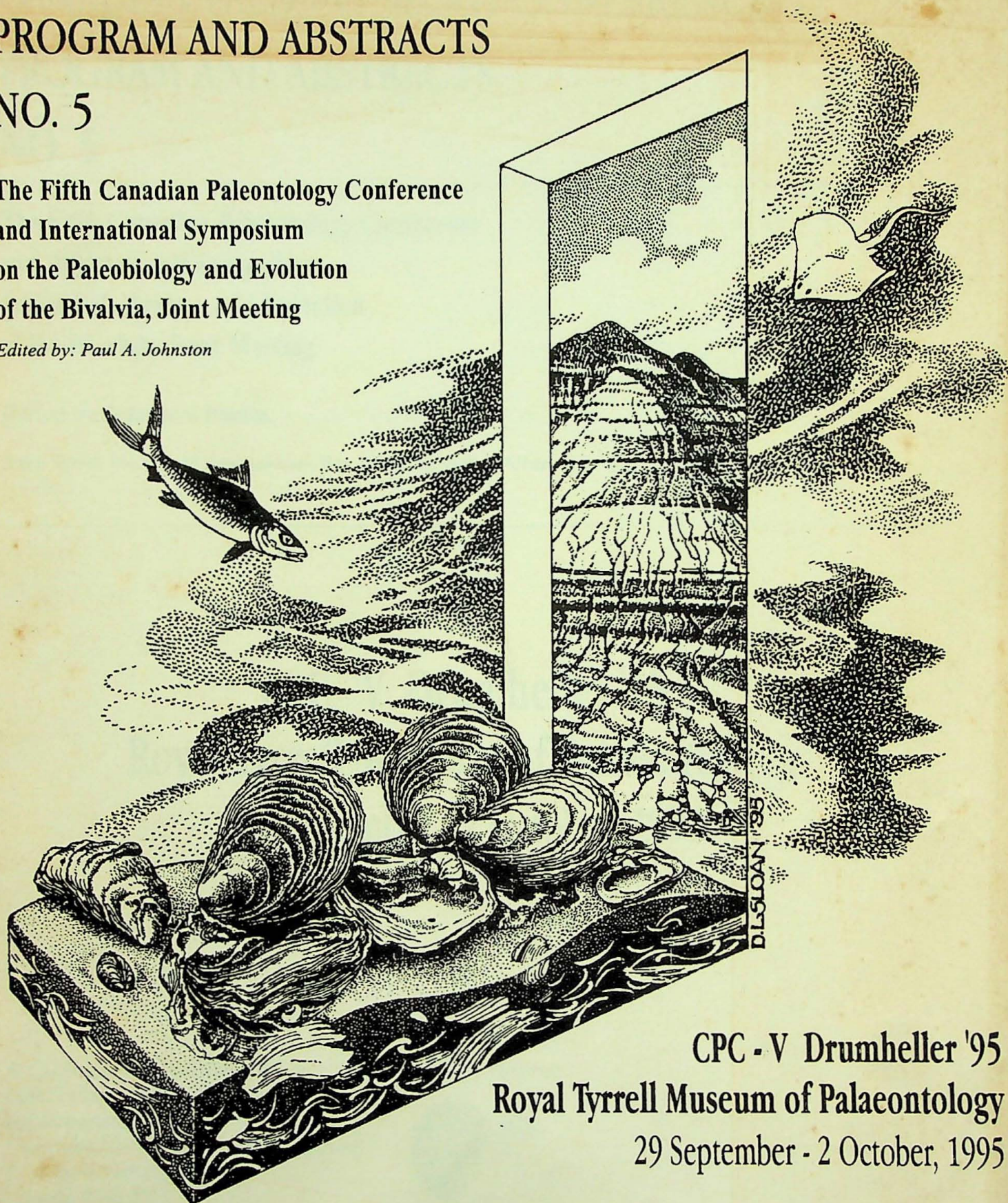


CANADIAN PALEONTOLOGY CONFERENCE PROGRAM AND ABSTRACTS

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PALEOBIOGEOGRAPHY AND EVOLUTION OF LATE PALEOZOIC PELECYPOD FAUNAS (PARANÁ BASIN) FROM BRAZIL*

Late Paleozoic marine invertebrate assemblages (Tubarão and Passa Dois groups) in the Paraná Basin are dominated by pelecypods that evolved in an epicontinental sea having a complex geological and ecological history associated with a transgressive/regressive cycle. Tubarão Group assemblages (transgressive phase) are more diversified with pelecypods, subordinate brachiopods, gastropods, echinoderms, and rare arenaceous foraminiferans. In the upper Tubarão Group, the Rio do Sul Formation assemblages (Rio da Areia, Baitaca) show a high proportion of epifaunal, filter-feeding forms (mainly pectinids) together with elements of byssate semi-infauna and shallow infauna. Locally, in an organic-rich substrate (Passinho assemblage), infaunal, detritivorous taxa dominate. Overlying the Rio Bonito and Palermo formations, assemblages are mostly composed of infaunal filter-feeding and semi-infaunal byssate elements, but epifaunal shells are sometimes locally abundant. A contrasting pattern is shown by Passa Dois Group assemblages (regressive phase), which are dominated by infaunal, shallow-, intermediate- and deep-burrowing, filter-feeding pelecypods associated with rare epifaunal, filter-feeding, byssate elements. As a whole, these pelecypods may have evolved *in situ*, from ancestors present in the Tubarão Group and in other Upper Paleozoic marine sequences in South America. Their evolution may have resulted from interruption in larval dispersion, leading to allopatric speciation. Rare elements, however, show wide distribution in the Paraná Basin suggesting dispersion of planktotrophic larvae during a short-lived flooding episode within the predominant regressive cycle.

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SEQUENCE STRATIGRAPHY: THE BANE OR SALVATION OF PALEONTOLOGY?

"Teeter-tottering through the foreland basin"

Sequence stratigraphy was initially promoted as a system that provided universal time lines resulting from eustatic changes that could be identified geophysically. In the minds of many geologists and geophysicists this relegated paleontology and other chronostratigraphic methods to the oil patch waste bin. Recently there has been an increasing acceptance of the importance of