

Silurian (Wenlock) demosponges from the Avalance Lake area of the Mackenzie Mountains, southwestern District of Mackenzie, Northwest Territories, Canada.

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ABSTRACT

Platform-margin strata of the Avalanche Lake area in the Mackenzie Mountains of the Northwest Territories have yielded a fabulous diversity of silicified and non-silicified fossils, including Silurian (Wenlock) sponges. The demosponge assemblages comprise the epipolasid *Belemnospongia epiradiatus* n. sp.; the rhizomorine *Haplistion(?) frustrum* Rigby and Chatterton, and an abundant and diverse group of anthaspidellid orchocladines, including *Archaeoscyphia annulata(?)* (Rigby), *Archaeoscyphia attenuata* de Freitas, *Archaeoscyphia alternata* de Freitas, *Archaeoscyphia gislei* de Freitas, *Archaeoscyphia rectilinearis* de Freitas, and *Archaeoscyphia scalaria* de Freitas, along with *Somersetella(?) digitata* Rigby and Dixon. The orchocladines are also represented in the sponge fauna by *Patellispongia alternata* Rigby and Chatterton, *Patellispongia mackenziensis* n. sp., *Patellispongia rugosa* n. sp., *Patellispongia(?) attenuata* n. sp., and one coarsely canalled anthaspidellid of uncertain generic assignment. The astylospongiid sphaerocladines in the collection are: *Astylospongia praemorsa(?)* (Goldfuss), *Palaeomanon cratera* (Roemer), and *Carpospongia castanea* (Roemer), and a small, thin-walled, globe-shaped sponge of uncertain generic assignment. The sole tricanocladine lithistid is *Hindia sphaeroidalis* Duncan. Small initially calcareous and more rare permosphinctid demosponges respectively comprise the questionable aporate aphrosalpingid *Palaeoschada(?)* sp., and a porate cryptocoeliid of uncertain generic affinity. Unfortunately, some skeletal details have been obscured by coarse siliceous replacement so that details of microstructure are uncertain in some species. Gross skeletal fabrics, canal patterns, and growth forms, however, are commonly sufficient to identify the species. This is one of the most diverse Silurian assemblages known from North America, and certainly the most diverse assemblage from northwest of the Transcontinental Arch in the western United States and northwestern Canada. Diverse assemblages dominated by orchocladine lithistid sponges characterize faunas from northwest of the arch, while those from southeast of the arch are dominated by sphaerocladine and tricanocladine lithistids and astraeosponge heteractinids.

RÉSUMÉ

Les strates marginales de la plate-forme de la région du lac Avalanche, dans les Monts Mackenzie des Territoires du Nord-Ouest, contiennent une diversité fabuleuse de fossiles silicifiés et non silicifiés, dont les éponges siluriennes du Wenlock. Les assemblages à démosponges comprennent l'épipolaside *Belemnospongia epiradiatus* n. sp., le rhizomorine *Haplistion(?) frustrum* Rigby et Chatterton et un groupe abondant et diversifié d'anthaspidellides orchocladines, incluant *Archaeoscyphia annulata(?)* (Rigby), *Archaeoscyphia attenuata* de Freitas, *Archaeoscyphia alternata* de Freitas, *Archaeoscyphia gislei* de Freitas, *Archaeoscyphia rectilinearis* de Freitas et *Archaeoscyphia scalaria* de Freitas, avec *Somersetella(?) digitata* Rigby et Dixon. La faune spongiaire est aussi représentée par les orchocladinides suivants: *Patellispongia alternata* Rigby et Chatterton, *Patellispongia mackenziensis* n. sp., *Patellispongia rugosa* n. sp., *Patellispongia(?) attenuata* n. sp. et un anthaspidellide à canaux grossiers d'une affinité générique incertaine.