

Biogeography and taxonomy of the Middle Jurassic zeillerid brachiopods *Eudesia* and *Sphriganaria*.

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Mesozoic workers are generally of the opinion that the common European zeillerid brachiopod genus *Eudesia* King, 1850 also occurs along the southern Tethyan margin. Recent research in the Jurassic Ethiopian Province of Jordan, Israel and Saudi Arabia, however, indicates that Cooper's (1983) genus *Sphriganaria* has been misidentified over past decades as *Eudesia*. *Eudesia* is a strictly European taxon that, according to Muir-Wood (1965), has a cardinal process that is complicated in structure, hollow, with two small cavities, trilobed, prominent, and elevated above fused thickened hinge plates that are commonly pierced by 3 small cavities. *Sphriganaria* does not have a cardinal process but superficially resembles *Eudesia*. Similar genera include *Xenorina*, a eudesiid with a long, massive, bilobed cardinal process and *Apothyris*, with its distinctive ornamentation consisting of three generations of intercalation and eudesiid cardinalia similar to *Sphriganaria*. *Sphriganaria* is abundant in the Jurassic of Saudi Arabia (Dhurma Formation), Jordan (Mughanniyya Formation) and Gebel El-Maghara, Sinai Peninsula, Egypt (Masajid Formation). However, it is rare or absent in correlative strata in Israel (Hamakhtesh Hagadol, Makhtesh Ramon), Somalia (Bihen Limestone, Gahodleh Shale, Wanderer Limestone, Daghani shales) and Ethiopia (Antalo Limestone). *Eudesia* is confined to the Bathonian according to Muir-Wood (1965:830) whereas *Sphriganaria* ranges from the Bajocian to the Kimmeridgian. After sectioning numerous specimens from the Middle Jurassic (Callovian) of Jordan we were able to reconstruct and illustrate the loop of *Sphriganaria* Cooper, 1983 for the first time.