

The demosponge *Leptomitrus cf. L. lineatus*, first occurrence from the Middle Cambrian of Spain (Murero Formation, Iberian Chains)

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The locality of Murero in the Iberian Chains (SW of Zaragoza, Spain), has been known for more than a century for the quantity, and quality, of its trilobites. But in the last decades these Cambrian outcrops have also produced a small collection of soft-bodied fossils (palaeoscolecid worms, onychophorans, algae), as well as numerous brachiopods, trace fossils and echinoderms. Here we describe the only specimen known so far from Spain of the demosponge *Leptomitrus lineatus* (Walcott, 1920). It was found in the talus slope of the Rambla de Valdemiedes, on rocks from the Murero Formation assigned to Middle-Upper Caesaraugustinan Stage (Middle Cambrian). The sponge fossil is 13 cm long and has the peculiarity of a specimen of the brachiopod *Micromitra sp.* attached to its side, gaining height above the sea floor and thus in a better position for filtering food particles in suspension. This makes it a case of commensalism by the brachiopod over the sponge. However, this is not the first example of this type of interspecific relationship, and such cases are known between sponges and brachiopods from the Burgess Shale. The taphonomical study suggests that there was little or no disarticulation of the sponge spicules and that a quite complex series of alteration processes have occurred since these organisms were buried.