New Ediacaran-aged fossils from Central and Northwestern Iran

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Recent exploratory field mapping of marine sedimentary sequences in the Koushk Mine locality in the Bafq region of Central Iran, and on the northern slopes of the Elborz Mountains south of the Caspian Sea, has yielded large, complex body and trace fossils of Neoproterozoic–early Cambrian age. The recovered specimens resemble the previously documented Precambrian discoidal form *Persimedusites,* and the tubular morphotype *Corumbella*, which is a novel occurrence for Iran and otherwise only recorded before from Brazil and the western USA. Additional enigmatic traces cannot yet be interpreted unequivocally, but suggest that future work may uncover more unusual Ediacaran fossils from various localities in Central Iran.

Results from the 2015 Iranian–Australian exploratory field survey (Vickers-Rich *et a*l. 2017), and recent work by Farjandi and Soleimani, highlight the need for more detailed prospecting and documentation of Ediacaran fossils and localities in Iran. Examples of *Corumbella*, *Persimedusites* and *Namalia*-like forms, as well as algal traces and other biogenic structures are likely Neoproterozoic–early Cambrian in age. Notably, one area near Bafq yielded Cretaceous corals in sediments previously mapped as 'Precambrian', which are currently under study (Brian Rosen [The Natural History Museum, London] pers. comm. 2017). Because the Iranian *Corumbella* material is the first record of this taxon outside the Americas and indicates that more intense prospecting, especially in previously sampled localities in central and northwestern Iran, holds excellent prospects for significant future discoveries.

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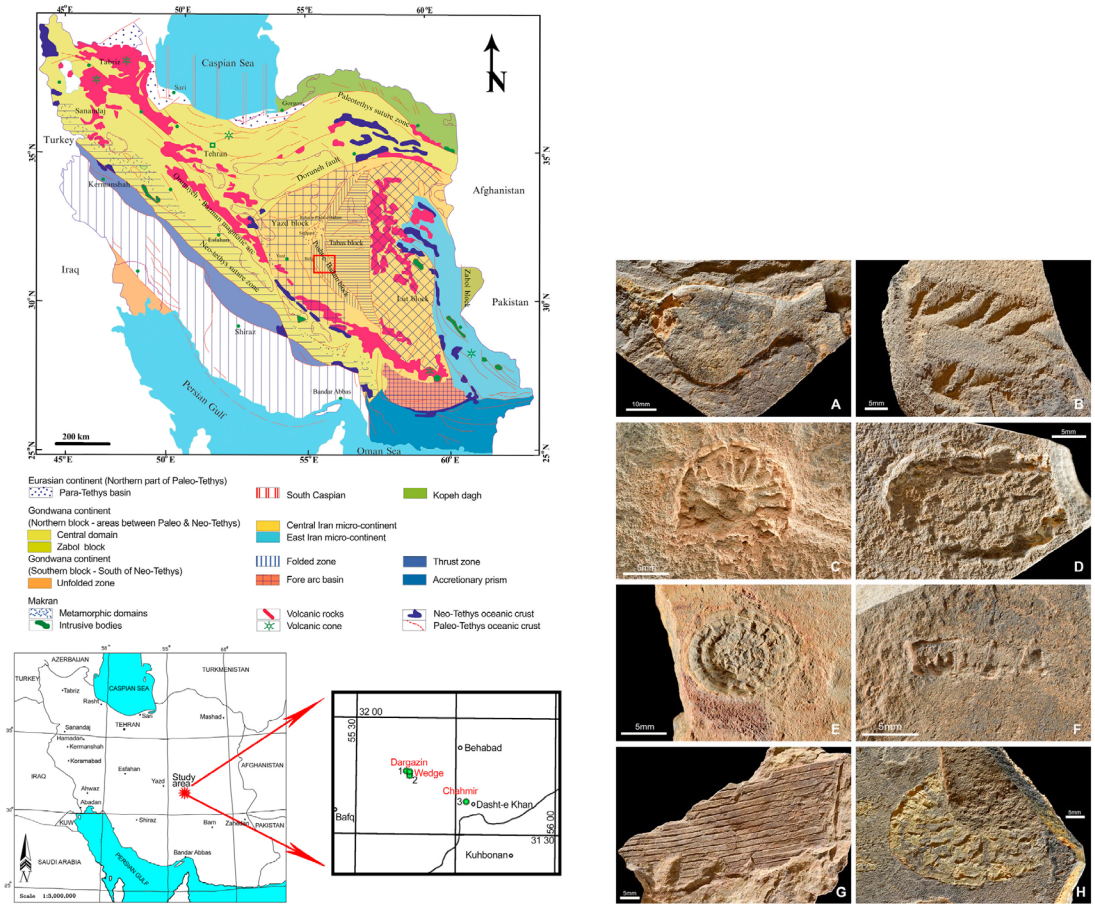

Fig. 1. Tectono-sedimentary regions of Iran after Aghanabati (2004). The red rectangle indicates the 2015 Iranian–Australian expedition area.

Fig. 2. Dargazin locality Ediacaran fossils recovered by the 2015 Iranian–Australian expedition. A, B, Possible holdfast structure.