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Volcaniclastic silcrete floras in eastern Australia provide new fossil evidence of the fern genus *Pteridium* (bracken).

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Pteridium is a cosmopolitan genus occurring in all continents, except Antarctica, and is among the most widespread vascular plant species known; and yet the fossil record world-wide is poor. This is because the fronds disintegrate while they are still on the plant, and the potential for fossilization is therefore limited. At four fossil sites in eastern Australia, however, fern foliage referable to *Pteridium* is identified. Characters traits useful in identification of *Pteridium* include vein arrangement, shallowly grooved stipe and costa, recurved margins of the pinnules, free laminal lobes on rachis, large frond size (several times pinnate), and a polycyclic siphonostele rhizome. All sites occur with Oligocene-Miocene volcanism and the ferns are preserved *in situ* in volcaniclastic sediments (palaeosols) - time capsules of the vegetation growing at each site. *Pteridium* today is associated with dry *Eucalyptus* forest, disturbed pastures and occurs along forest edges. Disturbance due to regional volcanism in Australia would have allowed *Pteridium* and other ferns to colonize these new volcanic terrains and they are therefore interpreted as early successional floras. The character traits in fossil *Pteridium* indicates closer links to *P. esculentum* than to *P. aquilinum,* which suggests that species divergence had occurred earlier than previously suggested.

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