

Reproductive Biology of a Rare Fern Species - *Adiantum peruvianum* (Adiantaceae: Pteridophyta)

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ABSTRACT

Gametophyte morphology and gametangial ontogeny were carried out on a rare fern species-*Adiantum peruvianum* Klotzsch by culture of spores on Parker's and Thompson's media in *ex-situ* conditions. Study reported the spore viability, spore germination, gametophyte development, sex gametes expression and reproductive success. Observations indicated that the archegonia appeared first in a high proportion of gametophytes, whereas, the antheridia developed later showing a cyclic gap in gametangial expression. Filamentous gametophyte matures into cordate stage on 46th day, which becomes archegoniate and antheridiate on 58th and 70th day respectively. Gametophytes had shown capitate hairs on the margin in a regular pattern, which however, occur randomly throughout the gametophyte. Sporophytes develop on 75-80th days, which indicated that the *A. peruvianum* performs sexual behaviour, irrespective of the fact that it exhibit irregular meiosis and sterile spores as recorded earlier.

Key words: *Adiantum peruvianum*, rare, gametophytes, ontogeny, intragametophytic selfing, intergametophytic selfing, sporophytes

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