

**Ecological studies of bryophytes on
unplastered sandcrete walls around
Ile-Ife.**

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Abstract:

Some aspects of the ecology of bryophytes on unplastered sandcrete walls around Ile-Ife were investigated over a period of more than 12 months. Two turf-forming bryophytes, Barbula indica and Bryum coronatum, were the commonest mosses encountered on these substrates. No bryophyte was found growing on burnt bricks or mud walls. Whereas Barbula is not a successful species as far as sexual reproduction is concerned, Bryum freely produces sporophytes. Reproduction in Bryum thus includes sexual methods while Barbula reproduces vegetatively by means of gemmae which are produced abundantly on almost every shoot. Gemmae and spores of these mosses, apparently present in the air when washed down by rain, form important sources of new plants on basic substrates. pH is an important factor in controlling the distribution of the mosses. Different stages of development of the moss species, e.g. diaspore germination and protonemal growth are favoured respectively at pH levels 4-12 and 6-10, but maximum shoot growth was observed at pH 10. Under favourable conditions, Bryum shoots establish within 3-4 months but Barbula takes a much longer time to establish.

Keywords: Bryophytes/ Sandcrete walls/ Bryum/ Barbula indica

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