

BRUNNIAN BRAIDS ON SURFACES
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A Brunnian braid means a braid that becomes trivial after removing any one of its strands. A typical example of 3-strand Brunnian braid on a disk is the braid given by the expression $(\sigma_1^{-1}\sigma_2)^3$, where σ_1 and σ_2 are the standard braid generators. The closure of this braid gives the Borromean rings. We consider Brunnian braids on an arbitrary surface. In the main theorem Brunnian braids are characterized algebraically on all surfaces except sphere and projective plane; in the last two cases homotopy groups of 2-sphere are involved in the characterization.