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Title: *Braid groups of the Projective plane*
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Abstract: We study the pure braid group short exact sequence described by Fadell and Neuwirth, namely

$$0 \to P_{m-n}(RP^2 - \{x_1, ..., x_n\}) \to P_m(RP^2) \to P_n(RP^2) \to 0$$

and the torsion of the pure Braid groups $P_n(RP^2)$ and of the braid groups $B_n(RP^2)$. The short exact sequence for $n = 2$ and $m = 3$ splits. This was was shown by Burskirk in the 60's. It is an open question the cases where $m > 3$. We show that the sequence does not splits if $m > 3$. For the torsion we show that there is a torsion element of $P_n(RP^2)$ of order k if and only if k is either 2 or 4. Similar there is a torsion element of $B_n(RP^2)$ of order k if and only if k divides either 4n or 4(n-1). Also the only element of order 2 in $B_n(RP^2)$ is the full twist. As a consequence of our result we can show that a k-th root of the full twist exists if and only if k divides either 2n or 2(n-1). For the non-splitting result we use some approach of coincidence theory. For the study of the torsion we use techniques of fibrations more standard in the study of the braids.