ABSTRACT

The present research was carried out on four ethnobotanically important local fruit trees of the Cholistan desert of Pakistan, namely *Ziziphus mauritiana* Lam., *Ziziphus spina-christi* (L.) Willd., *Ziziphus nummularia* (Burm.f.) Wight & Arn., and *Syzygium cumini* (L.) to assess their wood anatomical properties. All selected species were observed to have diffuse-porous woods with indistinct growth rings. Vessels were mostly solitary or in radial multiples of 2 in *Ziziphus mauritiana, Z. nummularia,* and *Syzygium cumini* while in radial multiples of 2 to 5 in *Ziziphus spina-christi*. The outline of vessels was rounded in all selected species. The intervessel pits were scalariform to opposite in *Ziziphus* spp. while vestured pits were present in *Syzygium cumini*. Uniseriate to biseriate rays were observed in *Ziziphus spp.*, while mostly biseriate rays were observed in *Syzygium cumini*. Simple perforation plates and diffuse, confluent, vesicentric types of parenchyma were present in all selected species of *Ziziphus*. Lozenge-aliform type of parenchyma was present in *Syzygium cumini*. The fibers were thin-walled and non-septate in all selected species. Fiber length, width, lumen diameter, ray height, and ray diameter were found to be comparatively larger in *Syzygium cumini*. The number of rays per mm^2 was comparatively larger in *Ziziphus nummularia, showing their better resistance to wood-deteriorating agents than* other selected species. The Runkel ratio showed that selected species are suitable for making paper.