

Chemical Science International Journal Volume 34, Issue 4, Page 153-166, 2025; Article no.CSIJ.140515 ISSN: 2456-706X (Past name: American Chemical Science Journal, Past ISSN: 2249-0205) Flavonoids Diversity and Therapeutic Significance in *Terminalia brownii* Ikikii S.M. a* and Kahindo J.M. a a Department of Pure and Applied Sciences, Technical University of Mombasa, P.O. Box 90420 – 80100, Mombasa, Kenya. Authors' contributions This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript. Article Information DOI:

<https://doi.org/10.9734/CSIJ/2025/v34i4984> Open Peer Review History: This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://pr.sdiarticle5.com/review-history/140515> Received: 10/05/2025 Published: 16/08/2025 ABSTRACT *Terminalia brownii* species within the family Combretaceae, is a widely distributed deciduous tree native to tropical and subtropical regions of Africa, particularly in Eastern and Central parts, including Kenya, Ethiopia, Sudan, and Uganda. Traditionally, various parts of *T. brownii*, including the bark, leaves and roots have been used in folk medicine to manage diarrhea, malaria, wound infections, respiratory disorders, and gastrointestinal conditions. The medicinal value of *T. brownii* is largely attributed to its rich profile of secondary metabolites, notably tannins, saponins, alkaloids, phenolics, and flavonoids. Flavonoids such as quercetin, kaempferol and luteolin have been identified in different plant parts, contributing to the plant's antioxidant, antimicrobial, antiinflammatory and hepatoprotective activities. Despite growing interest in the pharmacological properties of *T. brownii*, comprehensive reviews focusing specifically on the diversity and therapeutic relevance of its flavonoid compounds remain limited. This review aims to bridge that gap by summarizing the subclasses of flavonoids isolated from different parts of *T. brownii* and highlighting their medicinal applications with a view toward informing future drug discovery and development efforts.