Contribution ID: **41** Type: **not specified**

MORPHO-ANATOMICAL STUDIES OF EIGHT SPECIES OF IXORA L. (RUBIACEAE) IN SOUTHWESTERN NIGERIA

Tuesday, 22 July 2025 12:45 (15 minutes)

The genus *Ixora* L., a member of the diverse Rubiaceae family, encompasses a range of plant forms from shrubs to small or medium-sized trees. Despite its botanical significance and widespread occurrence, there remains a notable paucity of comprehensive morphological research specifically on *Ixora* species. This research gap has led to widespread misidentification, particularly in regions like Nigeria, where various distinct *Ixora* species are frequently and erroneously identified solely as *Ixora coccinea*. Consequently, accurate species-level differentiation within the genus is often confined to their primary centers of origin.

This study aimed to systematically characterize eight *Ixora* L. species through comprehensive morphological and anatomical evaluations, with the objective of establishing robust identification criteria. Quantitative and qualitative vegetative morphological traits were meticulously recorded using standard measurement tools. Concurrently, quantitative and qualitative anatomical features, including foliar epidermal characteristics, venation patterns, and stomata types, were critically assessed using light microscopy with a calibrated ocular.

Morphological analysis revealed consistent generic traits across all species, such as acute leaf apices, opposite arrangement, attenuate bases, entire margins, and terminal inflorescences, though floral coloration exhibited interspecific variation. All observed morphological and anatomical features demonstrated significant taxonomic utility.

In conclusion, shared morphological characteristics reinforce the grouping of these species within the *Ixora* genus, while distinct interspecies differences in both morphological and anatomical features provide clear and essential criteria for species-level differentiation and identification.

Keywords: *Ixora* L., Morphological characters, Anatomical, Morpho-anatomical study, Rubiaceae, Taxonomic significance

Word count: 237

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Session Classification: Contributed talk: Room-2 (Statistics, Biostatistics and Epidemiology)

Track Classification: Sciences: Biology