

PROTOTAXOPITYS ANDREWSII, A NEW COMBINATION FOR *PROTOTAXOXYLON ANDREWSII* AGASHE & CHITNIS

KRÄUSEL AND DOLIANITI (1958) created a new genus for Palaeozoic pycnoxylic gymnospermous wood having only the secondary xylem characterised by araucaroid tracheid pitting and spiral thickenings. Earlier MEHTA (1952) had described *Spiroxylon indicum* from the Lower Permian shales of Singrauli Coalfield, Mirzapur District, Uttar Pradesh, India. The diagnostic character of this wood is the spiral thickening of secondary tracheids. Another species of the same genus *S. intertrappeum* was described by UTTAM PRAKASH AND SRIVASTAVA (1959, 1961) from the Deccan Intertrappean beds of Sitapuri, Dist. Dhar in Madhya Pradesh, India.

UTTAM PRAKASH AND SRIVASTAVA transferred *Spiroxylon indicum* and *S. intertrappeum* to the genus *Prototaxoxylon* and thus gave new combinations *Prototaxoxylon indicum* and *P. intertrappeum*. AGASHE AND CHITNIS (1971) described a well-preserved wood from the Jharia Coalfield, Bihar and assigned it to a new species of *Prototaxoxylon* namely *P. andrewsii*. This wood was assigned to *Prototaxoxylon* because of the diagnostic characters such as araucaroid pitting and spiral thickening of secondary xylem. However, the wood showed several characters such as 1-3 seriate circular-slightly horizontally compressed bordered pits, closely spaced single or double, clockwise or anti-clockwise spiral thickening bands and 1-2 seriate xylem rays, cross-field pits cupressoid, ovoid, 2-6 per pitfield, which were not found in other species of the genus described earlier; so it was assigned to a new species *Prototaxoxylon andrewsii*.

However, this particular petrified wood which was partly calcified and partly silicified had rather well preserved but incomplete primary xylem and pith region. In this connection it may be pointed out here that KRÄUSEL AND DOLIANITI (1928) established a new genus *Taxopitys*, based on *T. africana* from the Lower Permian of South West Africa. This genus was characterised by secondary wood of *Prototaxoxylon* type, primary xylem mesarch, homo- or hetero-cellular nonseptate pith. LEPEKHINA (1963) had remarked that the primary xylem due to its variability cannot be used as a basis for recognition of new genera and hence the diagnosis of *Taxopitys* coincides with that of *Prototaxoxylon*. However, later on the same author concluded that there should be two groups of form genera recognised on primary tissue structure and secondary wood structure. This was further reaffirmed by MAITHY (1974).

Thus, the foregoing account clearly indicates that the generic name *Prototaxoxylon* should be restricted to the woods having secondary xylem only and the genus *Taxopitys* should comprise woods wherein secondary xylem of *Prototaxoxylon* type and primary xylem have been preserved. In this connection mention may be made of another form *Parataxopitys brasiliiana* Maniero 1951 (= *Parataxopitys americana* Kräusel & Dolianiti comb. nov. 1958), known to have primary xylem which was possibly mesarch in nature. LEPEKHINA (1974) referred *Parataxopitys* to *Taxopitys* because the nature of primary xylem was not correctly demonstrated by the original authors.

In view of the above discussion *Prototaxoxylon andrewsii* is transferred to the new genus *Prototaxopitys* with the same previous specific name, having the following diagnostic characters.

Diagnosis—Pycnoxylic gymnospermous wood showing the secondary xylem of *Prototaxoxylon* type, fairly large pith composed of loosely arranged oval, round parenchymatous

cells with intercellular spaces in them. Primary xylem strands projecting in the pith region. They are composed of small tracheids with scalariform thickening. The primary xylem strands show endarch position of protoxylem tracheids.

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S. N. AGASHE
Department of Botany, Bangalore University,
Bangalore—560001