Summary

There are two main contrasting theories on the origin of cupules of the Fagaceae. One postulates that the cupule is the ultimate branches of a dichasium. The other theory postulates that it is an intercalary structure, which originated and developed within the family. BRETT'S (1963) theory was referred as a representative of the former in this paper. FORMAN (1966) states against this theory that how is the cupule for the central flower of Lithocarpus or Chrysolepis explained. He stands on the second theory, and regards primitive cupule as a 3-lobed extension of the pedicel below each flower. From such an extension, through fusions and reductions, all types of the cupule in the family have been evolved. However, it remains a question that how these spinal regions of the cupule are located as if they are ultimate branches of the dichasium in Castanea and Castanopsis.

I have investigated the development of cupule in Castanopsis cuspidata var. sieboldii. In this species, usually, a fruit is enveloped in a cupule. Before inception of the perianth lobes, two secondary bracts are differentiated, and a secondary axis is formed in the axil of each bract. Subsequently, a rim-like swelling initiates in the basal part of each bud, and, at almost the same time, another swelling was observed in the adaxial side of the flower (Fig. 5–3). As these swellings have differentiated into scales, new ones initiated inside of them. First lateral swellings continue to the second on the adaxial side (S2). Therefore, the adaxial part of the cupule should not be regarded as to be derived from the secondary bud. However, it is obvious that these secondary axis also assists in the formation of the cupule.

The cupule of C. cuspidata var. sieboldii may consist both of intercalary growth of the axis below the flower and of secondary axis. The latter develops into the meristems of the spinal region. It may be a general condition in Castanopsis and Castanea.

References


加藤雅啓：カリマンタン産コシケシダのフィールドノート
昨年マレーシア国境に近いクラン郡ロンギウン地域で行なった植物調査中、標高 1000 -1500 m の谷合いでコシケシダを探集した。カリマンタンでは未記録と思われるが、別して珍しいものではなく、川幅数 m から 20–30 m のいろいろな川に渓流沿い植物として普通にみられ、苔巻した岩上や砂質の川床には生えている（ジャワのゲデー山麓の小川の岩床でも見たことあり、標本のラベルにも川床としばしば記されている）。しかし川近くの林床の 2 個体所にも 2・3 個体が生えていたので厳密な意味での正真正ち渓流沿い植物とはいえいかんかも知れない。10–20 cm の大きさの個体が最多であったが、数 cm のものもあれば 30 cm をこえるものまであった。邦産等のコシケシダやナチシケシダとの関係については改めて論じたい。