

Nomenclatural Note On *Aequitriradites* Delcourt & Sprumont 1955, A Genus Of Mesozoic Palynofossils

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THE genus *Aequitriradites* was established by Delcourt and Sprumont (1955, p. 44) for certain Wealden microspores which were apparently similar to those of the Palaeozoic genus *Cirratriradites* Wilson & Coe 1943. *Aequitriradites* differs from the latter genus in the absence of 'fovea' and in the presence of a 'hilum' in some species (Cookson & Dettmann 1961, p. 426). An apparently similar genus *Kraeuselisporites* Leschik differs in being proximally aperturate (trilete) with membranous, laesurate lips (Dettmann 1963, p. 92). Pocock (1962, p. 51) prescribes a circular outline of the central body and a very variable equatorial outline for the spores of *Aequitriradites* to differentiate these from those of the genus *Couperisporites*. However, if this differentiation is accepted, then, many of the specimens earlier assigned to species of *Aequitriradites*, viz., *A. verrucosus* (Cookson & Dettmann 1958, p1. 18, figs 2-6; Cookson & Dettmann 1961, p1. 52, figs 1-6) and *A. spinulosus* (Cookson & Dettmann, 1958, p1. 18, figs 9, 10, p1. 19, figs 1,5; Cookson & Dettmann 1961, p1. 52, figs 7-10) will have to be separated from *Aequitriradites*. In fact, *Couperisporites* is better diagnosed by its sparsely echinate zona and rugulate peripheral zone of the central body surrounding the distal polar area which is characteristically composed of polygonal plates (Pocock 1970, p. 63).

Delcourt, Dettmann and Hughes (1963) re-examined and refigured holotypes of the two Belgian species of *Aequitriradites*. They concluded that the holotype of *A. inconspicuous* (Delcourt & Sprumont 1955, p1. 2, fig. 6; refigured *loc. cit.*, p1.45,fig.4) is conspecific with the holotype of the type species, *A. dubius* (Delcourt & Sprumont 1955, p1. 3, fig. 7a;

refigured *loc. cit.*, p1. 45, figs 1-3). However, a perusal of photographs in the above two publications shows that Delcourt, Dettmann and Hughes not only chose a wrong specimen as holotype of *A. dubius*, but also inadvertently designated the actual holotype of *A. dubius* as the holotype of *Densoisporites triradiatus* (*loc. cit.*, p1. 45, fig. 7). Now, this creates a problem. If the holotype of the type species of *Aequitriradites* is such that it cannot be differentiated from *Densoisporites* then the validity and legitimacy of the former taxon is jeopardised.

Article 7.2 of the International Code of Botanical Nomenclature (ICBN, 1988) says "A nomenclatural types (typus) is that element to which the name of a taxon is permanently attached, whether as a correct name or as synonym...". That virtually means that if the holotype specimen of *Aequitriradites dubius* represents a species of the genus *Densoisporites*, then the former genus becomes a junior synonym of the latter taxon. Under Article 7.3 of the ICBN "A holotype is the one specimen or other element used by the author or designated by him as the nomenclatural type. As long as the holotype is extant, it automatically fixes the application of the name concerned". Accordingly, the specimen at 40.2 : 97.5 on slide V2 of Delcourt and Sprumont (1955, p. 45) is the holotype of *Aequitriradites dubius*.

Under Article 7.15 of the ICBN "The type of the name of a taxon of fossil plants of the rank of species or below is the specimen whose figure accompanies or is cited in the valid publication of the name (see Art 38). If figures of more than one specimen were given or cited when the name was validly published, one of these specimens must be chosen as

type". Accordingly, the specimen which is illustrated by figure 7a, plate 3 in Delcourt and Sprumont (1955) is the holotype of *Aequitriradites dubius*. Which means that figure 7a, plate 3 illustrates the specimen at 40.2 : 97.5 on slide V2. In case the figure does not illustrate the cited specimen, what remedy do we have?

Under Article 38 of ICBN "In order to be validly published a name of a new taxon of fossil plants of specific or lower rank published on or after 1st January, 1912 must be accompanied by an illustration or figure showing the essential characters, in addition to the description or diagnosis, or by a reference to a previously and effectively published illustration or figure."

Thus, here the emphasis is on an illustration for valid publication. In case figure 7a, plate 3 is not that of the cited type specimen of *A. dubius*, the species loses its validity, as the second illustration, i.e., figure 7b, plate 3 of this species (Delcourt, Dettmann & Hughes, 1963, p. 291) is believed to represent a distinct and separate species. If the species *A. dubius* is not validly published then the name has no status under the ICBN; Article 12 of which reads "A name of a taxon has no status under this code unless it is validly published (see Arts. 32-45).

However, if we accept the view of Delcourt, Dettmann and Hughes (1963, p. 291) that *A. inconspicuous* is conspecific with *A. dubius*, then the illustration of the former automatically illustrates the latter too but only if (i) figure 7a, plate 3 does not illustrate the specimen at 40.2 : 97.5 on slide V2, and (ii) this specimen belongs to the same taxon as the specimen at 40.5 : 98.5 on slide B103, which is the type illustration for *A. inconspicuous*. This would satisfy the requirement under Article 38 of ICBN.

In case figure 7a, plate 3 does illustrate the specimen at 40.2 : 97.5 on slide V2, then *Aequitriradites dubius* loses its holotype to *Densoisporites triradiatus*.

Now, can we, in this case, designate a new type for *A. dubius*? Normally we cannot, because under Article 7.2 of ICBN the name of a taxon is permanently attached to a nomenclatural type. And, Delcourt and Sprumont (1955) had in fact designated a holotype

for *A. dubius*. So the name *A. dubius* is attached to the specimen at 40.2 : 97.5 on slide V2, and if that specimen goes to some other genus, *A. dubius* automatically gets transferred.

However, if we disregard the original typification by Delcourt and Sprumont and assign a new holotype to *A. dubius* or a new type species to *Aequitriradites* the genus yet may be validated. For that we either accept figures 1-3, plate 45 of Delcourt, Dettmann and Hughes (1963) as the holotype of *A. dubius* or we accept *A. inconspicuous* as the type species of *Aequitriradites*. We suggest that *A. dubius* having become a confused name, *A. inconspicuous* may be designated as the type species for the genus.

Probably this much leeway is allowed under Article 37 of the ICBN which reads "Publication on or after 1 January 1958 of the name or a new taxon of the rank of family or below is valid only when the nomenclatural type is indicated....". The genus *Aequitriradites* having been instituted in 1955, a change in typification may be in order.

But, will it result in a later homonym as Article 48 of ICBN is very explicit on this point? Article 48.1 says "When an author circumscribes a taxon in such a way as to exclude the original type of the name he uses for it, he is considered to have published a later homonym that must be ascribed solely to him". Under Article 64 of ICBN "A name is illegitimate and must be rejected if it is a later homonym, that is, if it is spelled exactly like a name previously and validly published for a taxon of the same rank based on a different type. Even, if the earlier homonym is illegitimate or is generally treated as a synonym on taxonomic grounds, the later homonym must be rejected, unless it has been conserved".

Under Article 48.2 of ICBN "Retention of a name in a sense that excludes the type can be effected only by conservation. When a name is conserved with a type different from that of the original author, the author of the name conserved, with the new type, must be cited".

It is therefore proposed that in spite of the confusion about the typification, the generic name

Aequitriradites be conserved with *A. inconspicuous* Delcourt & Sprumont 1955 as the type species with its holotype at 40.5 : 98.5 on slide B 103.

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