PROPOSED USE OF THE PLENARY POWERS TO VARY THE TYPE-SPECIES OF THE GENUS *HOMOCERAS* HYATT, 1884 (CLASS CEPHALOPODA). Z.N.(S.) 1963

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The strata of the Carboniferous System were deposited before the onset of continental drift and before the break-up of the ancient land masses of the world. In consequence, horizons in lands now many thousands of miles apart can be accurately correlated by the classical methods of stratigraphical palaeontology. In the chronostratigraphic classification of the Carboniferous, as adopted in north-west Europe, the Carboniferous is divided into two Subsystems—the Dinantian (below) and the Silesian (above). The Silesian is further divided into Series of which the Namurian is the lowest. The term Namurian is used over all Europe and Asia, but in North America a different terminology is used. The limits of the Namurian itself and of the standard stage and zonal divisions within it are based on the occurrences of ammonoid cephalopods known as goniatites, the species of which display very rapid dispersal in space and rapid replacement of one species by another in time. Intercontinental correlations of Carboniferous rocks are largely made with their aid.

2. The stages of the Namurian Series now accepted as standard are:

Yeadonian
Marsdenian
Kinderscoutian
Alportian
Chokierian
Arnsbergian
Pendleian

The goniatite genus *Homoceras*, as interpreted for the last 47 years, is especially characteristic of the Chokierian and Alportian stages. These represent the lower (H_1) and upper (H_2) divisions of the original H (for *Homoceras*) Zone of Bisat (1924); the names for these divisions were proposed by Hodson (1957). The strata concerned can be recognized and correlated by means of these goniatites from Britain through Belgium (Bouckaert, 1961) and Germany (Schmidt, 1925) to Russia at least as far as Central Asia (Ramsbottom, 1957). The Chokierian (H_1) and Alportian (H_2) stages are divided into five zones, four of which are named from species of *Homoceras*. The topmost zone of the Alportian, the *Homoceratoides prereticulatus* Zone, is divided into two subzones, one of which is named from a species of *Homoceras*.

3. The type-species of *Homoceras* Hyatt, 1884 (p. 330), is *Goniatites calyx* Phillips (1836, p. 236, pl. 20, figs 22, 23), by monotypy. The figures depict juvenile forms but the original specimens in the Oxford University Museum do

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not allow it to be determined with certainty to which, of a number of species described from mature forms, they might belong.

4. Phillips clearly based his species on more than two specimens, for he cites three localities: "High Green Wood; Black Hall; Kulkeagh". No specimens from any of these localities can be identified with certainty as the figured examples in what remains of Phillips' collections. High Green Wood is near Hebden Bridge, Yorkshire, and the stratigraphical horizon is within the Kinderscoutian Stage. Black Hall is near Chipping, Lancashire, and the horizon is believed to be in the Dinantian Series (Lower Bollandian Stage). Kulkeagh is in County Fermanagh, Northern Ireland, and this horizon too is believed to be in the Bollandian. Bisat and Hudson (1943, p. 405) selected as "lectosyntypes" the (untraced) specimens from High Green Wood, with the intention of preserving *Homoceras* for a Namurian genus rather than for a different (if undeterminable) Dinantian one. Even if the Namurian (Kinderscoutian) species could be recognized, however, it is unlikely to belong to the same generic stock as the species of Alportian and Chokierian age now referred to *Homoceras*.

5. The generic name *Homoceras*, therefore, being based on a type-species whose syntypes, so far as known, are not only taxonomically useless (because immature), but not certainly available, is a *nomen dubium*. Nevertheless, although the name of the type-species has virtually disappeared from the literature, the generic name has been applied to several species which have long been widely used in stratigraphical studies. The name is used in teaching. Its stratigraphical importance has been drawn upon in palaeogeographical reconstructions (Hodson 1959). There is thus a clear case for conserving the name, and the evidence shows that this would be better achieved by varying the type-species than, for example, by designating a neotype for Hyatt's type-species.

6. For many years *Homoceras beyrichianum* (Haug) and its close relatives *H. smithii* (Brown) and *H. undulatum* (Brown) have been regarded as typical forms of the genus, and it is they that are the common forms in the Chokierian and Alportian stages. *H. smithii* is one of the most typical and widespread of all the species now referred to the genus, and it is proposed that it should be substituted for the unsatisfactory and unidentifiable *H. calyx* (Phillips). *Goniatites smithii* Brown (1841, p. 218, pl. 7, figs 34, 35) was first referred to *Homoceras* by Bisat (1924, p. 103) in the work which has become the starting-point for all subsequent studies of Carboniferous goniatites and their use in stratigraphy. The type-specimen is in the Manchester Museum, No. L.10244. It is from Milwood, near Todmorden, Yorkshire, and Brown states that he found it in association with *Goniatites* (now *Hudsonoceras*) *proteus* Brown. Recent work shows that this association of *H. smithii* and *Hudsonoceras proteus* is found only in a thin band at the base of the Alportian (H_2) Stage; but though thin, the band is found in Ireland, Great Britain, France, Belgium and Germany and it is one of the most reliable and widespread of the Namurian goniatite marker horizons (Hodson, 1957). *H. smithii* has also been reported from the southern Urals and from Central Asia (Ramsbottom, 1957, with references). The holotype has been refigured and described by Bisat (1924, p. 104, pl. 4,

fig. 4). The species has been illustrated by Hodson and Van Leckwijk (1958, pl. A, figs 2–4, pl. B, fig. 6) and by Bouckaert (1961).

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all designations of type-species for the nominal genus *Homoceras* Hyatt, 1884, hitherto made and, having done so, to designate the nominal species *Goniatites smithii* Brown, 1841, to be the type-species of that genus.

(2) to place the generic name *Homoceras* Hyatt, 1884 (gender: neuter), type-species by designation under the plenary powers, *Goniatites smithii* Brown, 1841, on the Official List of Generic Names in Zoology.

(3) to place the specific name *smithii* Brown, 1841, as published in the binomen *Goniatites smithii* (type-species, by designation under the plenary powers, of *Homoceras* Hyatt, 1884) on the Official List of Specific Names in Zoology.

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