

## Introduction to Part II

In this part will be found some details of published records of fossils arranged systematically in 30 chapters. An attempt has been made to cover the whole fossil record of the plant and animal kingdoms by documenting representative taxa at levels selected in each case by the contributor.

For each taxon treated the stratigraphically earliest (**First**) and latest (**Last**) published records are given. The references documenting these records have been selected so as to include a leading or key reference in each case, without attempting a bibliography. The references are grouped at intervals within each chapter and are abbreviated according to the *World List of Scientific Periodicals* (4th edn.), 1963–5. Where the taxon is **Extant** this is indicated without a reference.

Contributors have attempted to refer all records to a stratigraphical age on the standard scale adopted for this volume; this scale is explained in the Introduction (p. 3), and is used throughout in the standard abbreviated form shown in Table I (pp.5–9).

The charts throughout Part II plot the data given in the text in uniform manner on this stratigraphical scale. Each chart is divided into two parts, part A for the Pre-Cambrian to Carnian, and part B for the Norian to Holocene or Recent. Parts A and B of each Figure are printed on the left- and right-hand pages respectively, and each stratigraphical division is in register throughout the volume. All divisions are drawn equal, without any implication of equality in the time they represent.

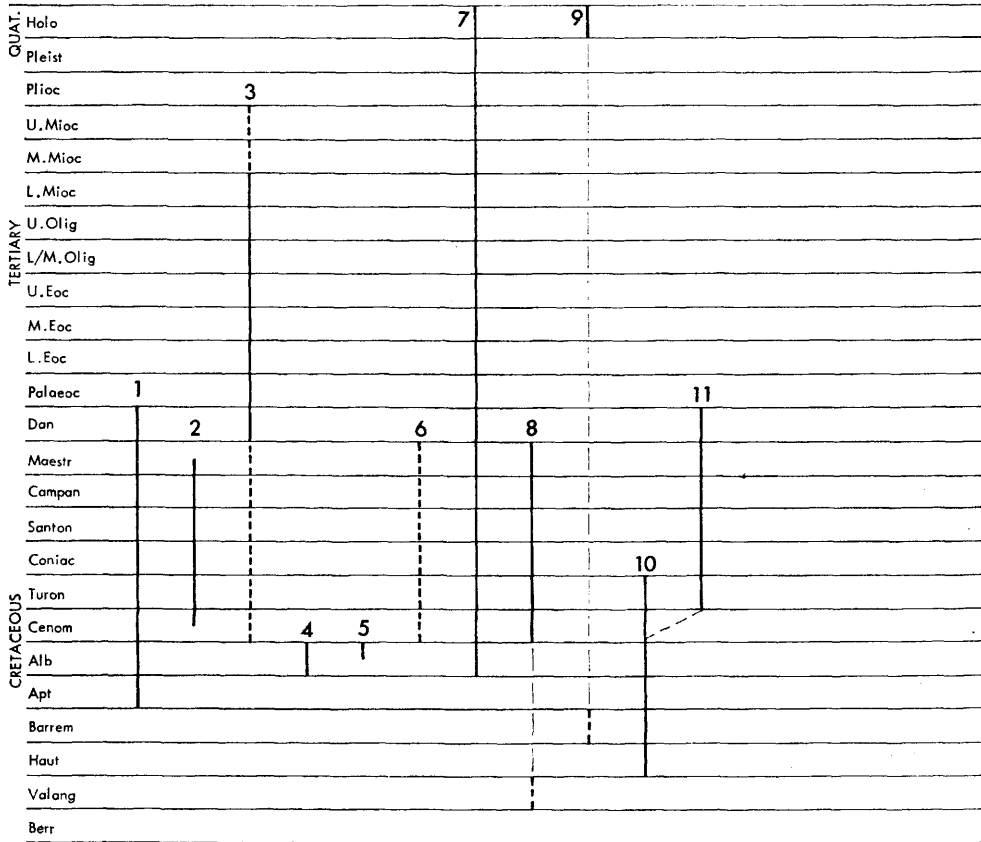
The fossil records are plotted on this scale according to conventions illustrated opposite. Each taxon selected is represented by one vertical line only, designed to show in visual form the total known stratigraphic range as documented in the text. No attempt has been made to indicate abundance of subordinate taxa or individuals at any time, or continuity of record between terminal records.

The usual procedure in plotting the lines has been to draw the line from the base of the stratal division of the earliest record to the top of the stratal division of the youngest (figure opposite, taxa 1, 4, 7); in a few cases a specified position within a stratigraphical division is shown for a terminal record (taxa 2, 5 in figure).

One or both ends of a line may be broken into dashes: this indicates that in the opinion of the contributor there is doubt about the precise age of the first or last record, either (*a*) on grounds of uncertain stratigraphic dating of the formation concerned, or (*b*) on grounds of dubious identification of the specimens or their dubious assignment to the taxon concerned. Examples are given in the figure (taxa 3, 6). If a dubious record is stratigraphically far removed from other more definite records, it may be shown separate from the rest of the line, though connected by a thin dashed guide line (see figure, taxa 8, 9). Similar thin dashed lines, running obliquely from one line towards another, indicate possible phylogenetic connections, where these have been suggested by the contributor (see figure, taxa 10, 11).

In general, taxa with no record earlier than 'Recent' (Holocene) are not shown on the charts.

*The Fossil Record, Part II. Introduction*



1. Taxon first recorded from Aptian, last from Danian.
2. Taxon first recorded in a formation considered by the contributor to be *Upper* Cenomanian; last recorded in a formation considered similarly to be *Lower* Maestrichtian.
3. First record is Upper Cretaceous, a more precise age not being given; last record is Miocene, unspecified.
4. First and last records (may be a single record), Albian.
5. First and last records (or a single record), Upper Albian.
6. First and last records both given as Upper Cretaceous, without more precise age.
7. Taxon first recorded in Albian, and still extant. This may indicate a taxon with a relatively continuous record, but it may refer to a single (but definite) record in the Albian, of a taxon otherwise only known in the living state.
8. Definite records Cenomanian to Maestrichtian inclusive; the Valanginian record may belong to this taxon, but its validity is regarded as questionable by the contributor.
9. Barremian record belongs to extant taxon; no intermediate records.
- 10 & 11. Taxon 10, Hauterivian to Turonian, is considered by the contributor to be ancestral to taxon 11, Turonian to Danian.