

The Dried Plant Collection Made by the Scottish Student John Snodgrass at Leiden in 1678

As a young teenager John Snodgrass attended the Universities of Glasgow and Edinburgh before going to the University of Leiden in the Netherlands in 1677 at the age of 22 to read medicine (Anonymous, 1854, 1875 ; Innes-Smith, 1932). During the first half of 1678 he collected about 685 plant specimens which with great care he pressed and mounted on 271 well-annotated folio pages with 19 pages of indices including a glossary. This is the earliest known, extant herbarium prepared by a Scot and only the third, very substantial and surviving collection known to have been prepared at Leiden in the 17th century (Heniger and Sosef, 1989). The collection has been in the possession of Glasgow University since 1768 (Baldwin 1989).

Though it is not explicitly stated, the great majority of the specimens in all likelihood came from the Leiden Hortus Botanicus, a long-established and species rich garden, part of the flourishing University (Veendorp and Baas Becking, 1937 ; Lunsingh Scheurleer and Posthumus Meyjes, 1975). Stressing the international importance of the university, Stearn (1961) stated « No other university has a more sustained and continuous record of service to medicine and botany during the 17th and 18th centuries than Leyden ».

For some specimens Snodgrass gave the places of collection, private gardens or from nature, notably « apud Catwik » (the modern Katwijk aan Zee). The specimens are arranged in four sections, the first three being in the Theophrastean classification of trees, shrubs with subshrubs and herbs. The fourth section has drug plants as listed in the Amsterdam pharmacopeia (Table 1). The great majority of the specimens have a date of collection (between 15 February and 26 June). In 1678 Snodgrass would have used the most up-to-date catalogue of the plants in the garden, that published by Florens Schuyt in 1668. His annotations make it clear that he consulted the works of many other authorities and was acquainted with Arnold Seyen, Praefectus Hortus Botanicus. The names of the specimens are given in

- Fig. 1. The title page of the Snodgrass herbarium. A translation of the main inscription is «Herbarium first begun on the 4th of the month of January 1678 by me John Snodgrass when I studied medicine at Leiden».
- Fig. 2. Folio 1 of the herbarium. The four specimens are *Arbutus virginensis* (*Aronia arbutifolia* (L.) Fell., Red Chokeberry, native of northeastern North America); *Arbutus foliis serratis* (*A. unedo* L., Strawberry Tree, native of Mediterranean area and westernmost Europe); *Amygdalus Indica fructu Holosericeo* (*Prunus tenella* Batsch, Dwarf Russian Almond, native of Eurasia); and *Alnus glutinosa viridis* (*A. glutinosa* (L.) Gaert M. (not *A. viridis* DC.), Common Alder, native of Eurasia and North Africa).
- Fig. 3. Folio 40. The upper specimen is *Taxus baccata* L., Yew. Snodgrass refers to no less than eight authorities: *B* (Gaspard Bauhin), *Mathioli* (Pierandrea Mattioli), *Dod* (Rembert Dodoens), *Theoph* (Theophrastus), *Nicandro* (Nicander of Calophon, early writer on poisonous plants), *Dios* (Dioscorides), *Cordi* (Valerius Cordus), and *Camerarii* (Joachim Camerarius the Younger). Elsewhere in the herbarium Snodgrass refers to other authorities such as *Carolus Clusius* (frequently, as CL; see figure 5), *Mathias de l'Obel*, and *Robert Morison*. Snodgrass gives the Scottish name as Yew tree. The lower specimen is *Pistachia terebinthus* L., Terebinth.
- Fig. 4. Part of folio 93. A translation of the inscription is «Chamomelum from the Cape of Good Hope. I have it from the garden of that distinguished man Master Seyen. This herb is very rare». The plant is *Cotula turbinata* L., a very common annual or perennial weed of cultivation in South Africa. Arnold Seyen, Praefectus of the Hortus Botanicus at the time of Snodgrass' visit, had a private garden at Gouda.
- Fig. 5. Folio 89. The trouble taken by Snodgrass in the preparation of his specimens is shown by these nine beautifully pressed and annotated specimens of *Crocus* and one *Cyclamen*, collected between 15 February and 3 March. Two Dutch names are given for the *Cyclamen*: *Verckensbroot* (sow-bread) and *Eerdeapple* (earth-apple).
- Fig. 6. Folio 144. «*Juncus Acutus apud Catwikum*». *Catwik* is rendered «*Catwijk op Zee*» in the *Johan Blaeu Atlas* of 1663 and is now *Katwijk aan Zee*, on the coast only a few km northwest of Leiden; this would have been an easy walk for Snodgrass. The specimen may well be *Juncus maritimus* Lam. rather than *J. acutus* L. Snodgrass collected other seaside plants at *Catwik* such as *Plantago coronopus* L. and *Hippophaë rhamnoides* L., and about Leiden «*Juncus Floridus Major B in fossis circa Leydani*» (*Butomus umbellatus* L. in ditches), and «*Isatis sativa sive Glatum*» (*Isatis tinctoria* L. or *Glastum*). The latter name is the old Roman name used by herbalists such as John Gerard, and *Glatum* is a modern Italian name. The fruits (bottom right) failed in the germination test.

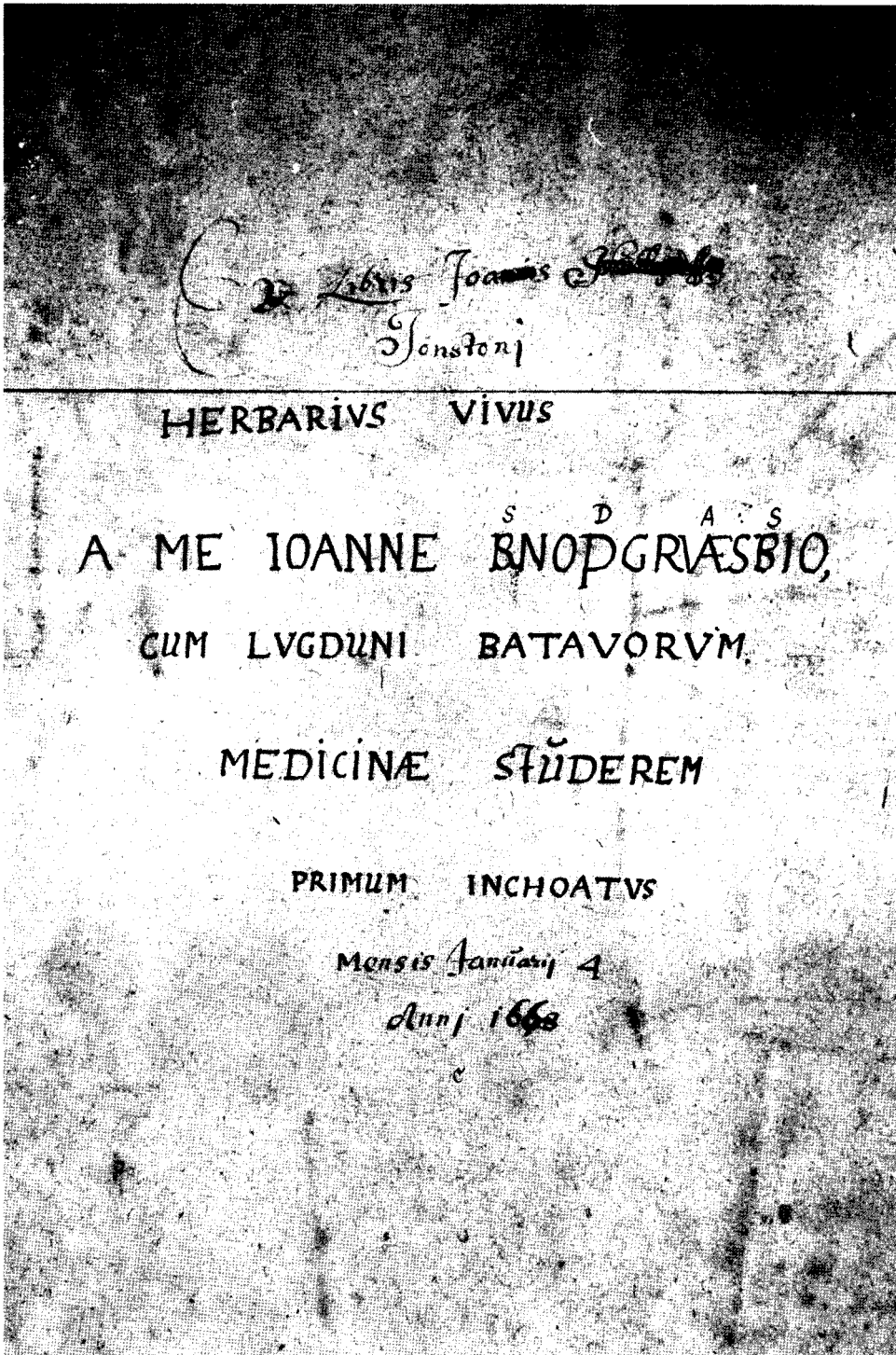


Fig. 1.



Fig. 2.

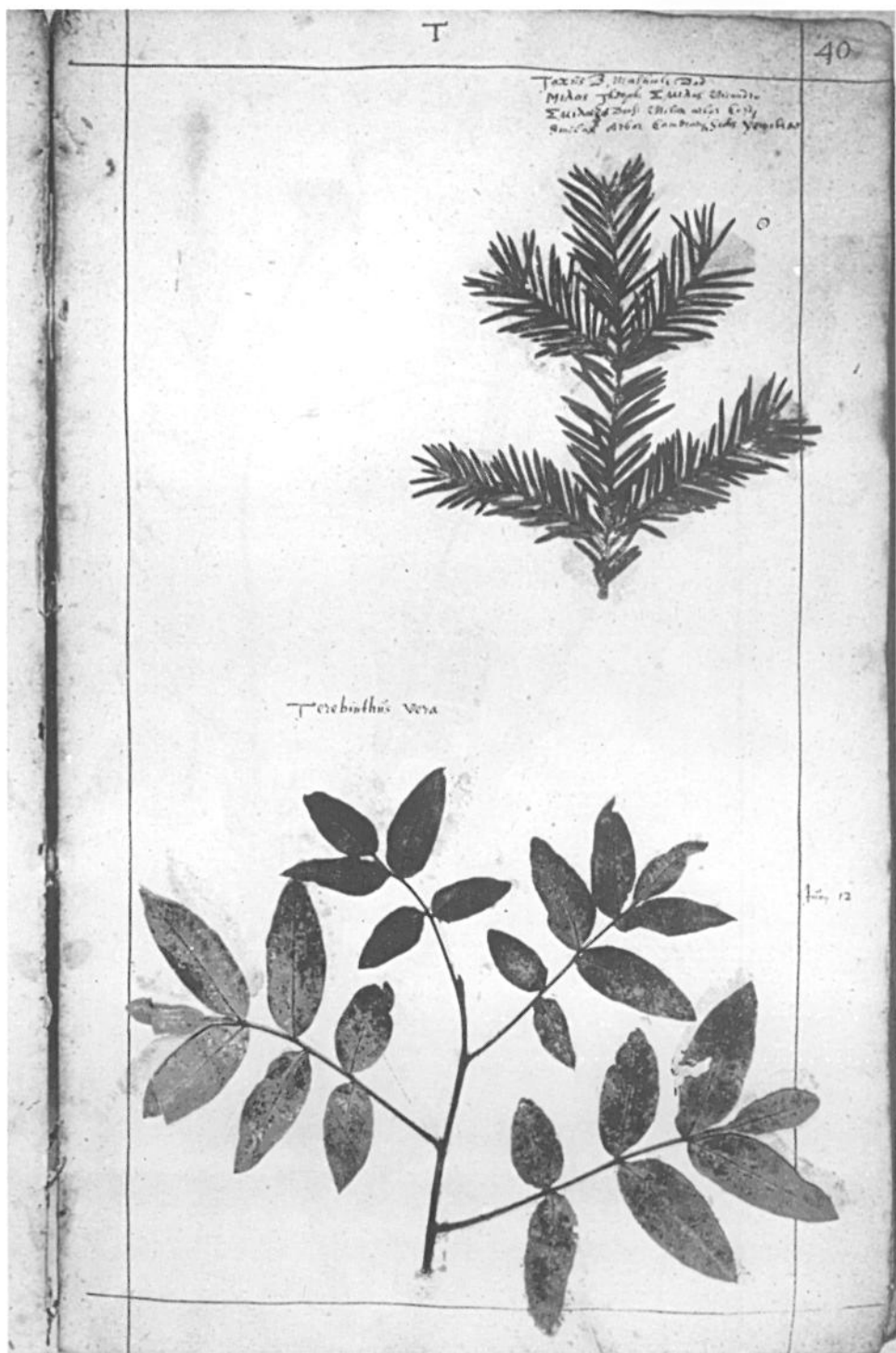


Fig. 3.

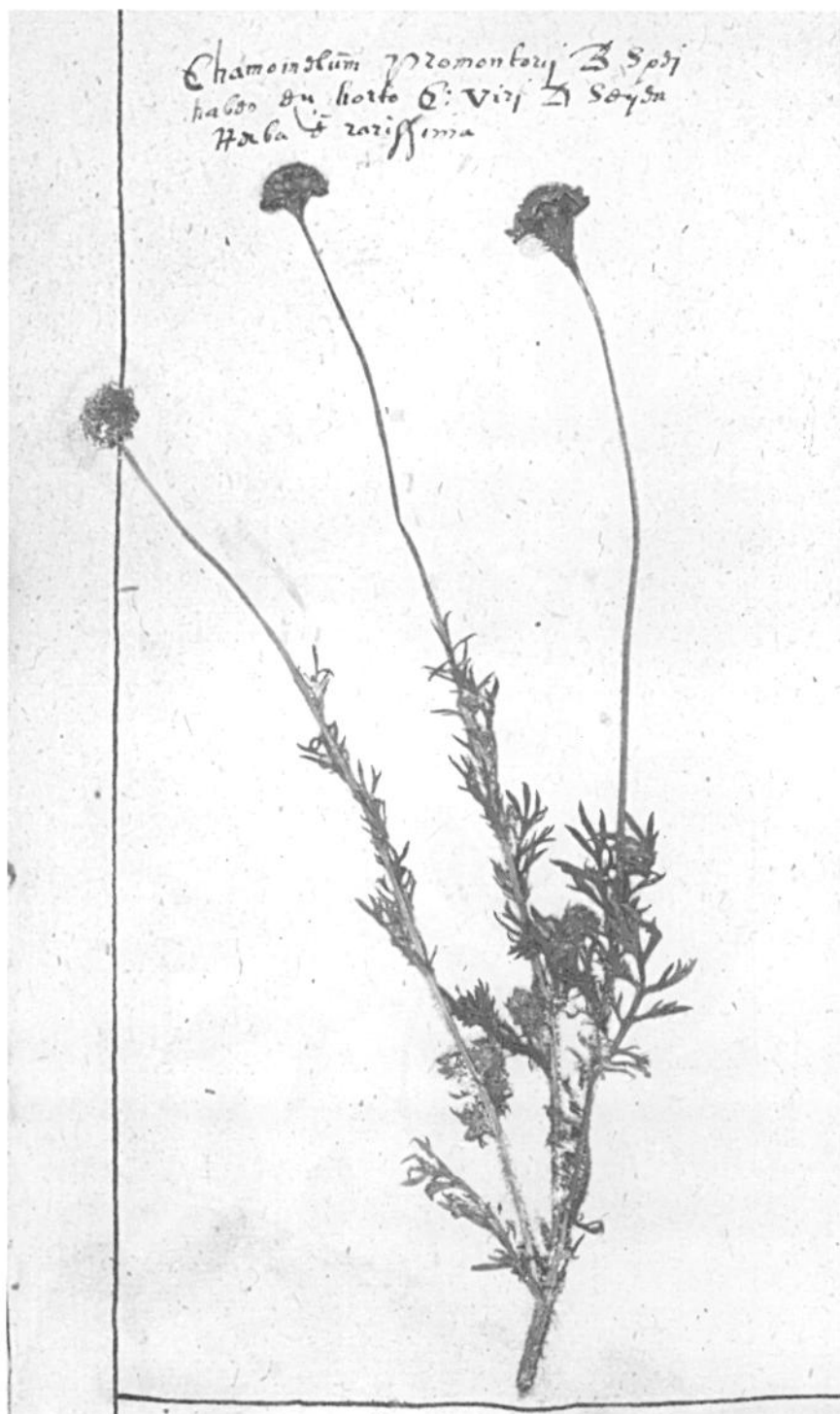


Fig. 4.

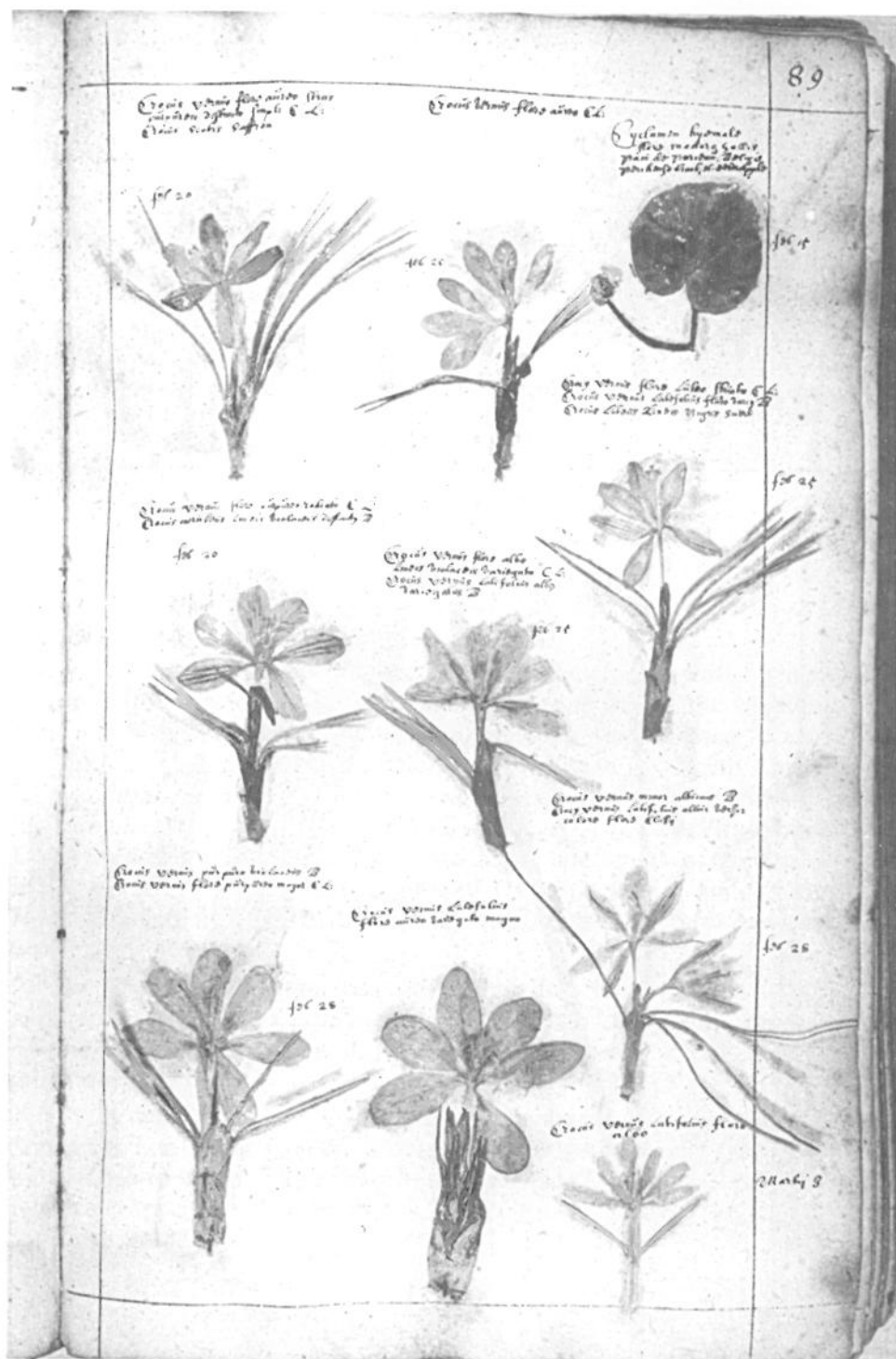


Fig. 5.



Fig. 6.

TABLE 1. — THE ARRANGEMENT OF THE SNODGRASS HERBARIUM

« Sectio Prima Arbores Continens Serie Alphabetica Dispositas »
 – First section contains trees arranged in alphabetical order, pages 1-43, with 113 specimens ;

« Sectio Secunda De fruticibus and Subfruticibus »
 – Second section of shrubs and subshrubs, pages 44-66 with 90 specimens ;

« Sectio Tertia Herbas Continens »
 – Third section contains herbaceous plants, pages 67-239 with about 620 specimens ;

« Sectio Quarta Folia and Herbas Continens in officinis asservanda : sequendo ordinem pharmacopoeae Amstelodamensis »
 – Fourth section contains leaves and herbs preserved in drug shops : following the order of the Amsterdam pharmacopeia, pages 240-271 with 42 specimens ;
 (Indices of 18 pages, botanical glossary of one page).

Latin polynomials and occasionally in Greek ; most but not all of the modern synonyms are readily found in Sosef *et al.* (1987). There are comments in Latin and in some cases the English, Scottish or Dutch vernacular name is added.

Showing the great scope of the Hortus Botanicus, the initial geographical origins of the species are very diverse : Europe including the Mediterranean area (e.g. *Salvia aethiopis* L.) and the southeast (e.g. *Spiraea hypericifolium* L.), the Canary Islands (e.g. *Jasminum odoratissimum* L.), North America (e.g. *Rubus odoratus* L.), South America (e.g. *Tropaeolum minus* L.), South Africa (e.g. *Cotula turbinata* L.), eastern and southeast Asia (e.g. *Thuja occidentalis* L., and *Diospiros lotus* L.). There are many specimens of genera of great horticultural importance such as nine of *Crocus*, seven of *Fritillaria*, eight of *Helleborus* and five of *Iris*. Specimens with double flowers (*flore pleno*) are well represented.

In 1981 a germination test was set up for those few species that had apparently ripe fruit : *Calendula arvensis* L., *Isatis tinctoria* L., *Lithospermum officinale* L., *Sonchus asper* (L.) Hill, and a species of Cruciferae. No germination took place.

With many hundreds of specimens and annotations as yet unstudied, the Snodgrass herbarium requires a detailed investigation ; only then will its full importance to botany and horticulture be revealed. Will the DNA from these numerous specimens, especially the horticultural ones, ever be used to bring to life the old cultivars (Sykes, 1991) ?

J. H. DICKSON
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