

*A Note Concerning a Constellation Name
in the Article on a Celestial Globe of Coronelli
in Suhayl 16-17 (2018-2019), pp. 328-330*

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In the late seventeenth century Vincenzo Coronelli (1650-1718) has taken care of the production of a greater number of celestial globes carrying, in addition to Greek, Latin and derived European names of the constellations, also their names in Arabic, in Arabic script (in addition to the traditional Arabic names in Latin transliteration). These globes were usually produced in pairs, a terrestrial globe together with a celestial globe.

The celestial globes fall into two groups: 1) two huge globes, one terrestrial and one celestial, each of diameter 3,85 meters. This pair has survived in France, well protected in safe places, mostly inaccessible to the public. Since 2007 they are now presented to the public in the entrance hall of the François-Mitterrand Building of the Bibliothèque Nationale in Paris. 2) the globes of diameter ca. 110 cm, also pairs of terrestrial and celestial globes. This group falls into three types: type I, convex (view of the sky from outside the globe), produced in Venice 1689, now in the Marciana Library in Venice, so far only this exemplar; type II, concave (view of the sky as seen from Earth), Venice 1691-92, and type III, convex, Venice 1699.¹ Of types I-III so far about sixty celestial globes exist and are known; for my researches I have checked 26 exemplars, part of them personally *in loco*, and the others from photographs published in articles of several authors.

The nomenclature of the constellations on the 110 cm-globes can be said to belong to «one family», whereas the nomenclature on the big globe which was con-

1. For the dating and sequence of types II (concave) and III (convex), since 2001 (= 2004) I followed the results of the researches of M. Milanese 1999-2000; in former publications, I followed the older literature, i.e. type II = convex (Venice 1692) and type III = concave (Paris 1693).

structed and produced 1681-1683 in Paris has its own style and character largely based on historical material — so there is no connection between its nomenclature and that of the 110 cm-globes.

As for the Arabic nomenclature for the 110 cm-globes, Coronelli in Venice had it organized through his connections in Paris. There was found a native speaker who formed the Arabic nomenclature of the constellations, mostly relying on the French forms of their names or, in names of Greek origin or so, their French pronunciation. It was also this native helper, or another one, in Paris who wrote down in his handwriting all these names. In that form the Arabic names, together with the entire picture of the surface of the globe, were sent to Venice. Here Western draftsmen, not knowing Arabic, copied this material, including the Arabic names in Arabic script, and all that was cut into a metal plate for being printed. The globe surface printed from that plate then became the globe of type I, 1689, existing until now in a single exemplar in the Marciana Library in Venice, where I have inspected it in a visit in May 1993.

The Arabic names copied by Western copyists and then printed as now visible in the Marciana exemplar of the globe of type I are still well recognizable and understandable. This globe is therefore the key for us to understand the Arabic name given to the constellation «Southern Fish», *Piscis Austrinus* (PsA), i.e. the last one of the 48 constellations identified and registered by Ptolemy (in Alexandria, around 150 A.D.) in the star catalogue in Books VII and VIII of his astronomical handbook, *Mathematike Syntaxis*, since the Middle Ages through the Arabic translations known in the West as the «*Almagest*».

In type I, the Arabic name of PsA is written, in Arabic, in one line, as: *ḥūt niṣf al-nahārī*, «the Fish of half of the day [= Meridian, midday]», copied by the Western copyist with a small mistake (omission of the *r*, in *al-nahārī*). This was the Arabic translation of the French form of the name on that globe, *Le Poisson Méridional*.

For the next two editions of these globes some years later — type II, concave, 1692, and type III, convex, 1699 — Coronelli had to care for new printings of their surfaces. So, for type II, again Western draftsmen redrew the names in the Arabic script, but of course since they did not know Arabic themselves, in forms less «original» than in type I, and with more mistakes. The same, afterwards, with type III.

For the «Southern Fish», these draftsmen wrote the Arabic name (which appeared in one line in type I) now in two lines, because the place on the globe did not suffice for one line for the three words of that Arabic name. Apparently, they followed their pure Western habit in cutting that name, leaving (beginning from

the left) the two words *niṣf al-nahā[r]ī* in the upper, main, line, and putting the last word on the right, *ḥūt*, under that line, under the other two words. So now, when looking at this Arabic name in that form of written presentation on the globes of type II and III, it becomes more difficult to understand its intended meaning.

One consequence of that has become visible just now recently in the Coronelli article in *Suhayl*, 16-17, p. 328-330. Here, in the Arabic name of the constellation «Southern Fish» the word *ḥūt* «Fish» (written under the other two Arabic words of the name) has not been considered at all, as if not belonging to that name. The first word on the right of the two words in the upper line (*niṣf*, «half», but the letters heavily misformed by the two or three generations of Western draftsmen who had copied also the Arabic words of the globes' nomenclature) has been interpreted as an Arabic transliteration of the Latin word *Piscis*, *fiṣīz*. The second of these two words is interpreted as *al-nihāī*, «the final, or last». Indeed, since Ptolemy it was known in East and West that *Piscis Austrinus* was the last of the 48 constellations in Ptolemy's star catalogue, but the Arabic translator in Paris of the type I globe would hardly have known Peter Apianus' *Astronomicum Caesareum* of 1540, Ingolstadt, where it was written «*Piscis notius postremus est, ...*», «the Southern Fish, it is the last one» (scil. of the constellations — not «the last Fish»...). Apart from that, Coronelli's globes of types I-III contained altogether 73 (or sometimes only 72) constellations, not only the 48 figures known from Ptolemy, but also many others found and established since the late 15th century by travellers and seafarers, south of the equator, but also in the northern hemisphere.

The word *ḥūt* «Fish» in the Arabic form of the name of the constellation, in types II and III of the 110 cm-globes written under the other two words, (which are interpreted in the Coronelli article of 2018-2019 as *fiṣīz al-nihāī* «the last Fish» seeming to follow the formulation of Apianus cited above) does not appear in that article's reading of the name; the word «Fish» appears there only once, in the Arabic transliteration *fiṣīz* = Latin *Piscis* with the added adjective *al-nihāī*, assumed to correspond to Apianus' *postremus*.

To sum up, it must be said that on all of Coronelli's celestial globes of types I-III the Arabic name of the constellation *Piscis Austrinus* (PsA) was clearly presented with the three words *ḥūt niṣf al-nahāī* (in type I in one line, but with the mistake of the omission of the *r* in the word *al-nahāī*, a mistake brought in by the Western draftsman who copied the Arabic original from Paris in Venice for the printing process), an Arabic translation of the constellation's French name, *Le Poisson Méridional*. In the later copies, on the globes of types II and III, the names were re-written, by other draftsmen, and looked stranger and more difficult to decipher.

Here the word *ḥūt* «Fish» was always written below, under the two other words of the name. But in the whole family of the celestial globes of type I-III of Coronelli which have been checked there was no one on which the Arabic name of the constellation Piscis Austrinus could be found rendered by the two words *fiṣṭāz al-nihāṭ* «Piscis postremus» (written in an upper line), with the (untranslated) word *ḥūt* written below, under these two words.

The globe discussed by the authors of the article in *Suhayl* 16-17, in the Biblioteca Federiciana in Fano, Italy, is a concave globe (there, p. 335), i.e. of type II, Venice 1691-1692 (Milanesi, p. 149-151, 156). So the name of Piscis Austrinus (PsA) there belongs to the family of the Arabic nomenclature in types I-III. Cf. a picture of it in the *Suhayl* article, p. 329, with a short discussion on p. 328. Similarly, a picture of the same kind of globe, of the concave type II, is shown in Kunitzsch 1992, Fig. 14, i.e. globe GL 31 in the Austrian National Library in Vienna.

REFERENCES

Of six articles which I have published on Coronelli's celestial globes between 1992 and 2010-2011 (+ 2012), two are cited here in this *Note*. In addition, the article of M. Milanesi on the classification and dating of Coronelli's celestial globes of types I-III has been cited.

KUNITZSCH 1992, P. Kunitzsch, Zu den dreisprachigen Inschriften einiger Himmelsgloben von V. Coronelli, in: *Der Globusfreund, Journal for the Study of Globes and Related Instruments* 40/41, 1992, pp. 67-71, with English translation by C. EMBLETON, pp. 72-74, Figs. 11-14.

— 2001 (= 2004), P. Kunitzsch, Coronelli's Great Celestial Globe Made for Louis XIV: the Nomenclature, in: *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften* 14, 2001, pp. 39-55; repr. in P. KUNITZSCH, *Stars and Numbers*, Variorum Collected Studies, CS791, Aldershot, Great Britain—Burlington, Vermont, USA, 2004, text XXIV.

MILANESI 1999, Marica Milanesi, Coronelli's Large Celestial Printed Globes: A Complicated History, in: *Der Globusfreund, Journal for the Study of Globes and Related Instruments* 47/48, 1999, pp. 143-160, with German translation by R. SCHMIDT, pp. 161-169, Figs. 19-24.