

NO. 19. PRELIMINARY DRAWINGS OF LUNAR LIMB AREAS, III

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1. Introduction

THIS paper is the third of six intended to present a total of 12 drawings of the limb areas of the moon, which are to supplement the photographic *Rectified Lunar Atlas* now in preparation.

The two drawings presented here extend the west lunar limb (astronautical direction) from the equator to 30° north latitude and 30° south latitude. They were based on suitable rectified photographs, using the best available photographs as supplementary reference material. This method was fully described in *Communications No. 4*.

The two modifications introduced in the second paper are continued here. These were: (a) the inversion of east and west with north at the top to conform to standard cartographic directions; and (b) the use of dotted circles to represent craters not well shown on the photographs (cf. *Comm. No. 9*). As before, those details are omitted from the drawings for which an identification cannot be made with reasonable certainty.

2. Notes on the Accompanying Plates

Plates 19.1 and 19.2 are key charts to Areas 10 and 16. They have an approximate longitude and latitude grid in intervals of 10° and are inserted for use in identification and comparison. The nomenclature of named features is also given.

Area 10 (Pl. 19.4) covers the west lunar limb (astronautical direction) from the equator to 30° north latitude. It was drawn based on Mt. Wilson No. 231 (rectified) and McDonald No. 373 (rectified). Other reference photographs were rectified

prints of Mt. Wilson Nos. 226 and 252, Lick No. 186, and McDonald No. 373, as well as unrectified prints of Yerkes Nos. 836, 1604, and 1167, Mt. Wilson Nos. 236 and 231, and McDonald No. 373.

Area 16 (Pl. 19.6) covers the west lunar limb (astronautical direction) from the equator to 30° south latitude. The drawing was based on McDonald Nos. 372 and 74 (rectified). Other reference photographs were rectified prints of Mt. Wilson Nos. 172 and 230, Yerkes No. 1592, and McDonald No. 372, as well as unrectified prints of Yerkes Nos. 1604, 1167, and 1170, and McDonald Nos. 74, 121, and 373.

Two special problems were encountered in constructing Area 16: (a) The number of reference photographs available for the area was small, and none of these had been made at a time when librations were favorable. This introduced certain distortions during projection, with the result that the detail along the extreme limb is greatly compressed. (b) None of the available photographs had been made under sunset illumination. It was therefore necessary to reverse the direction of illumination by 180° to conform with the illumination on the previous sections (cf. *Comm. No. 4*). This area will be redrawn whenever suitable photographs become available.

The stereoscopic drawing (Pl. 19.7) of the Mare Orientale is reproduced to emphasize the several concentric fault scarps that have this great basin as their center.

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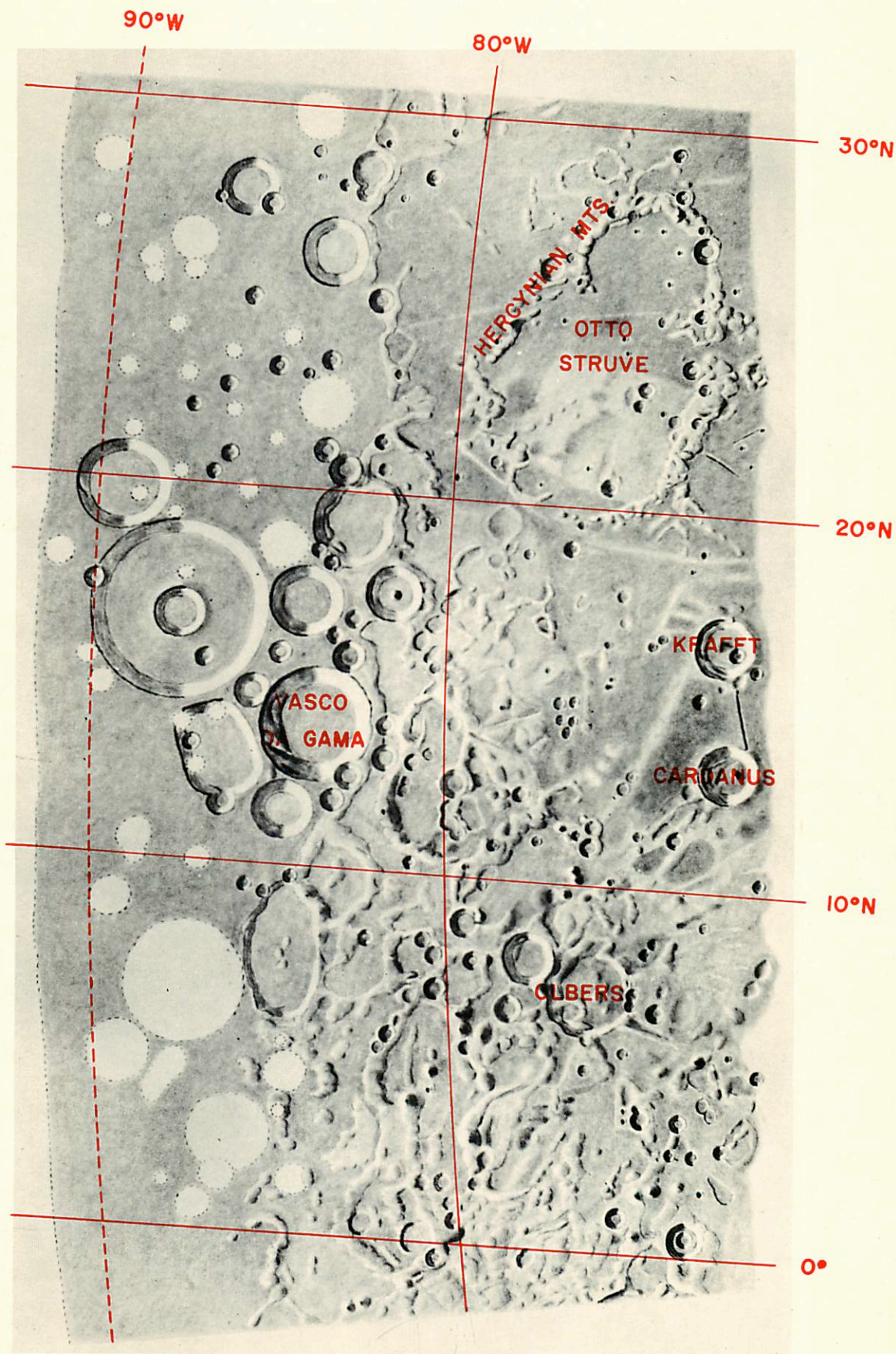


Plate 19.1. Key chart to Area 10

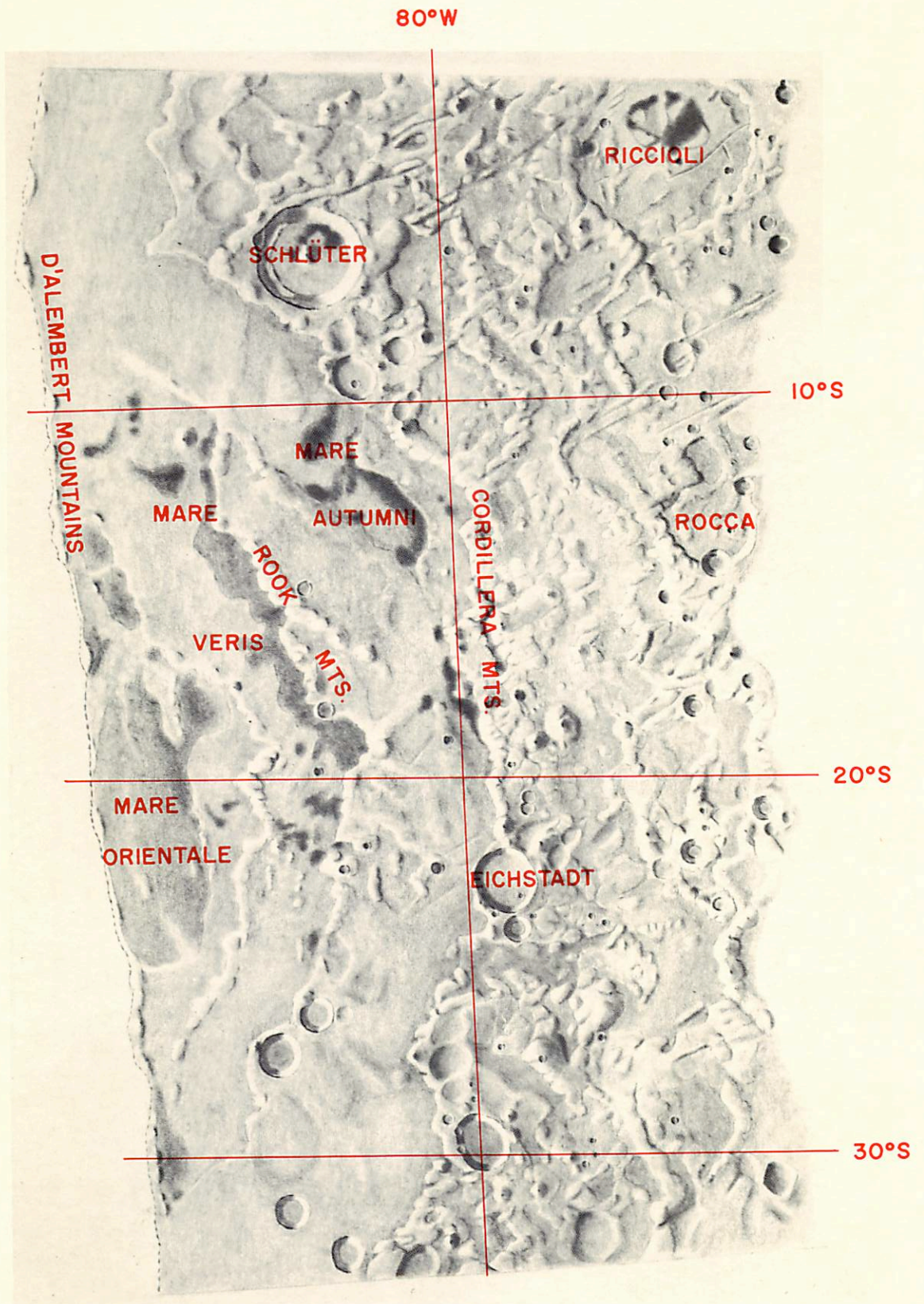


Plate 19.2. Key chart to Area 16

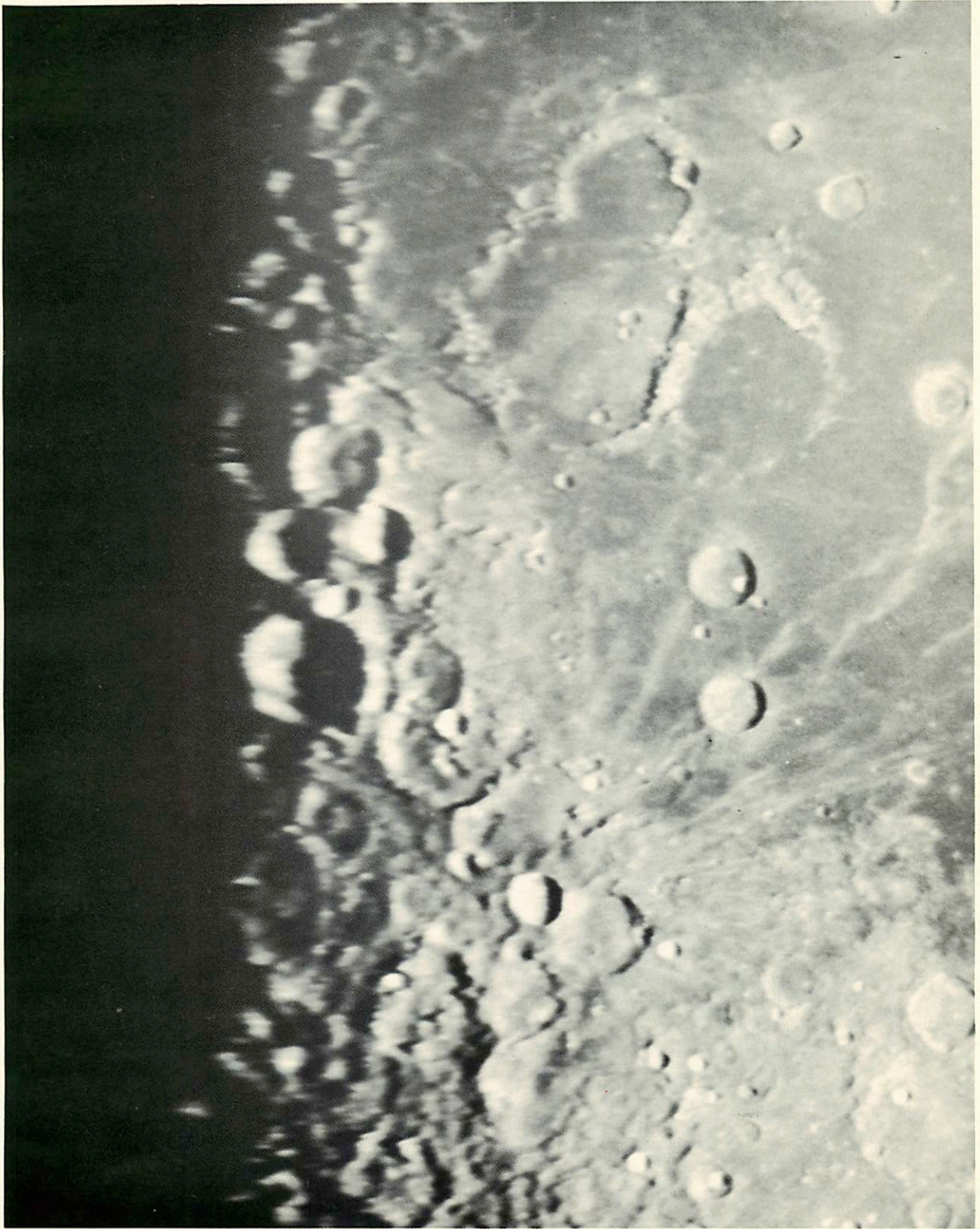


Plate 19.3. Rectified photograph of Area 10

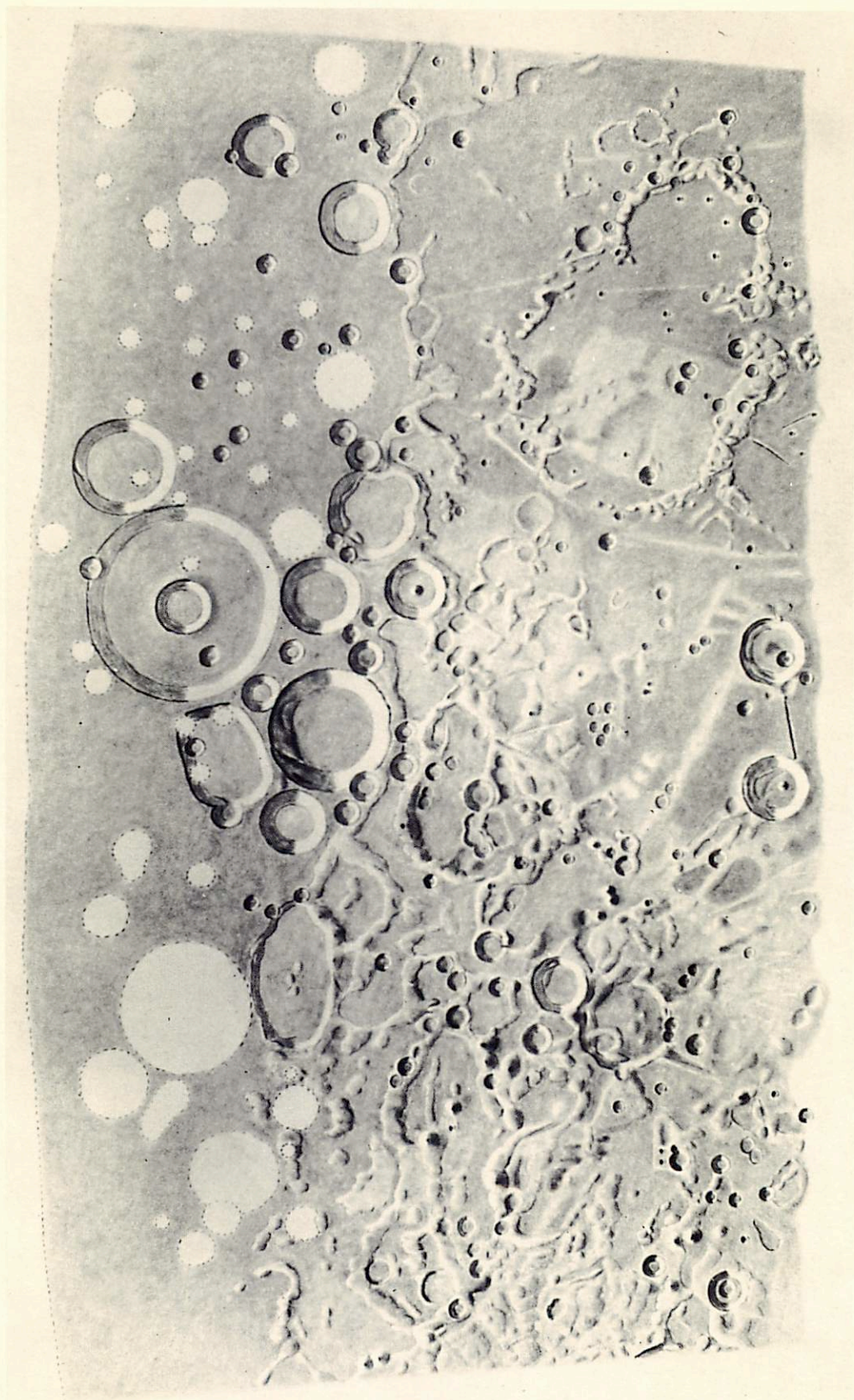


Plate 19.4. Drawing of Area 10

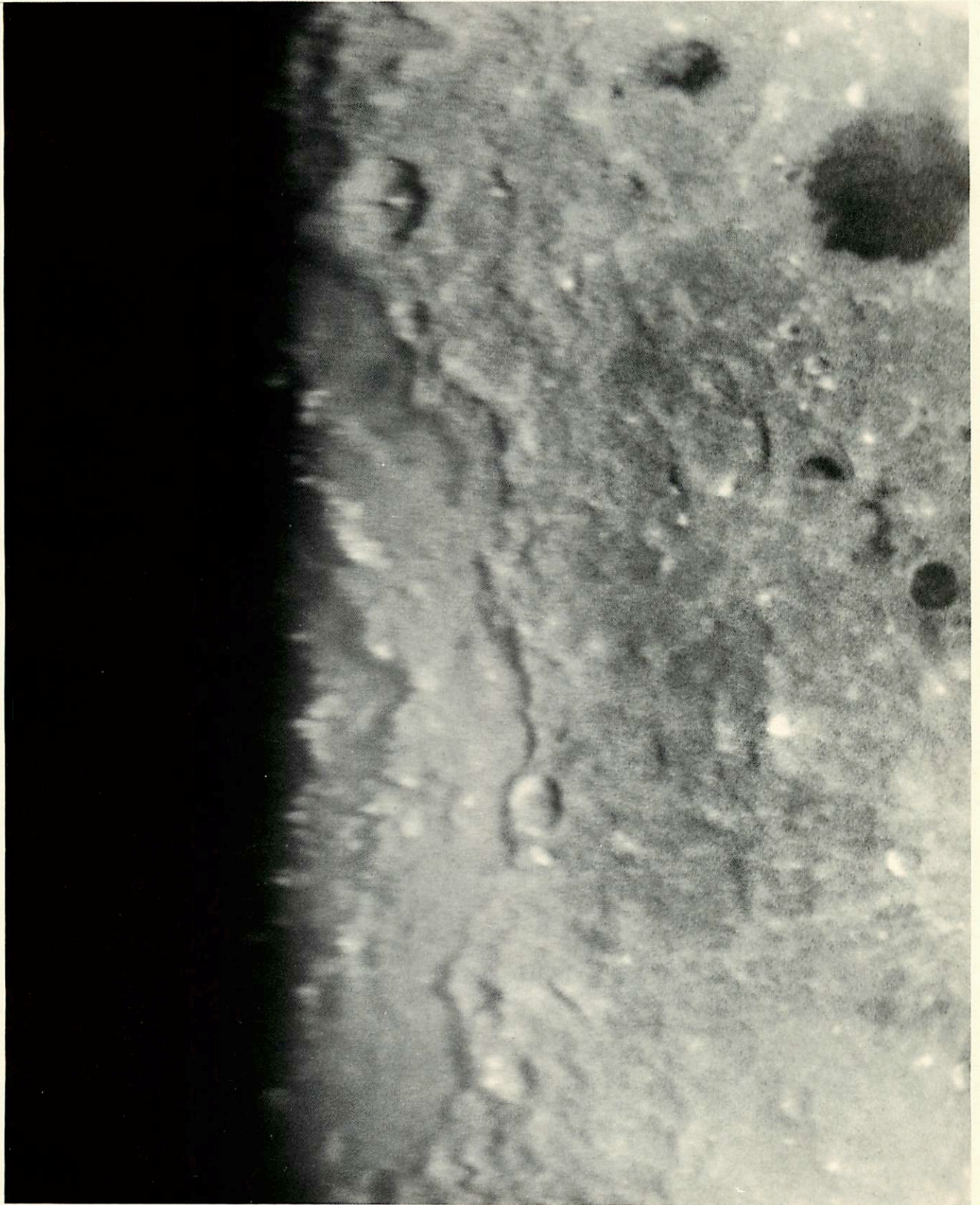


Plate 19.5. Rectified photograph of Area 16



Plate 19.6. Drawing of Area 16

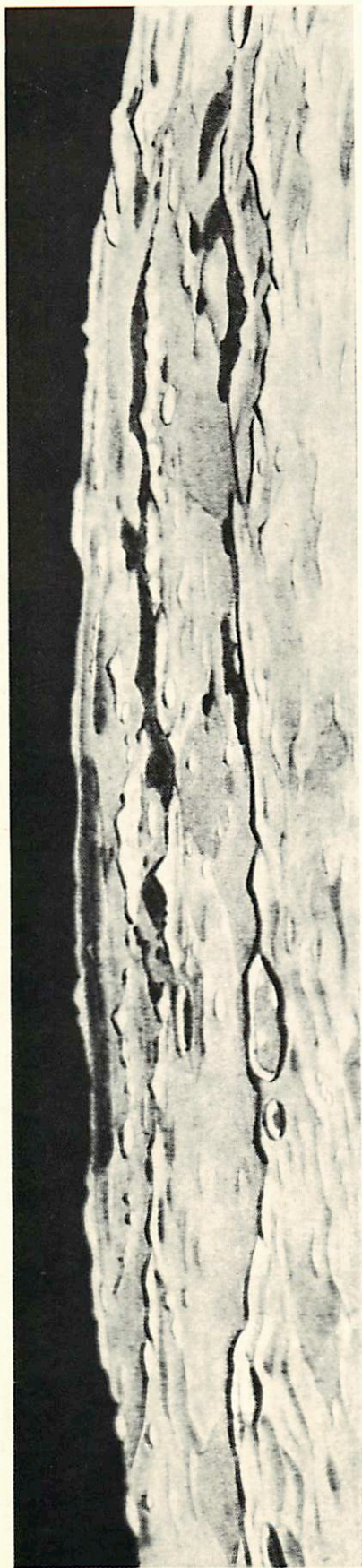


Plate 19.7. Stereoscopic drawing of Mare Orientale