Distribution of statistical characteristics of biogenic elements in the Northwestern part of Black Sea (UkrSCES, 1955-1999)

By priority of negative consequences on the condition of the Black sea ecosystem and especially its northwestern shelf (NWS), according to the Bucharest Convention and Strategic Plan on rehabilitation of the Black sea, eutrophication and chemical pollution are the most important issues.

The adverse situation in the NWS is so that this extensive area is shallow, receives polluted waters from the largest rivers of the basin and has a rather slowed down exchange with the open part of the sea.

Therefore the study of spatial distribution and dynamics of these substances is an urgent task of modern ecological investigations.

It is known, that the major factor of euthrophication of reservoirs, including Black Sea, is the increased inflow of biogenic elements.

On maps of the spatial distribution of biogenic elements in 20-minute squares the basic statistical characteristics for each of them for the time period 1955 - 1999 are submitted (fig. 1-12).

Fig. 1 Distribution of statistical characteristics of NH_4 in standard 20-minute squares (Northwestern part of Black Sea, surface)

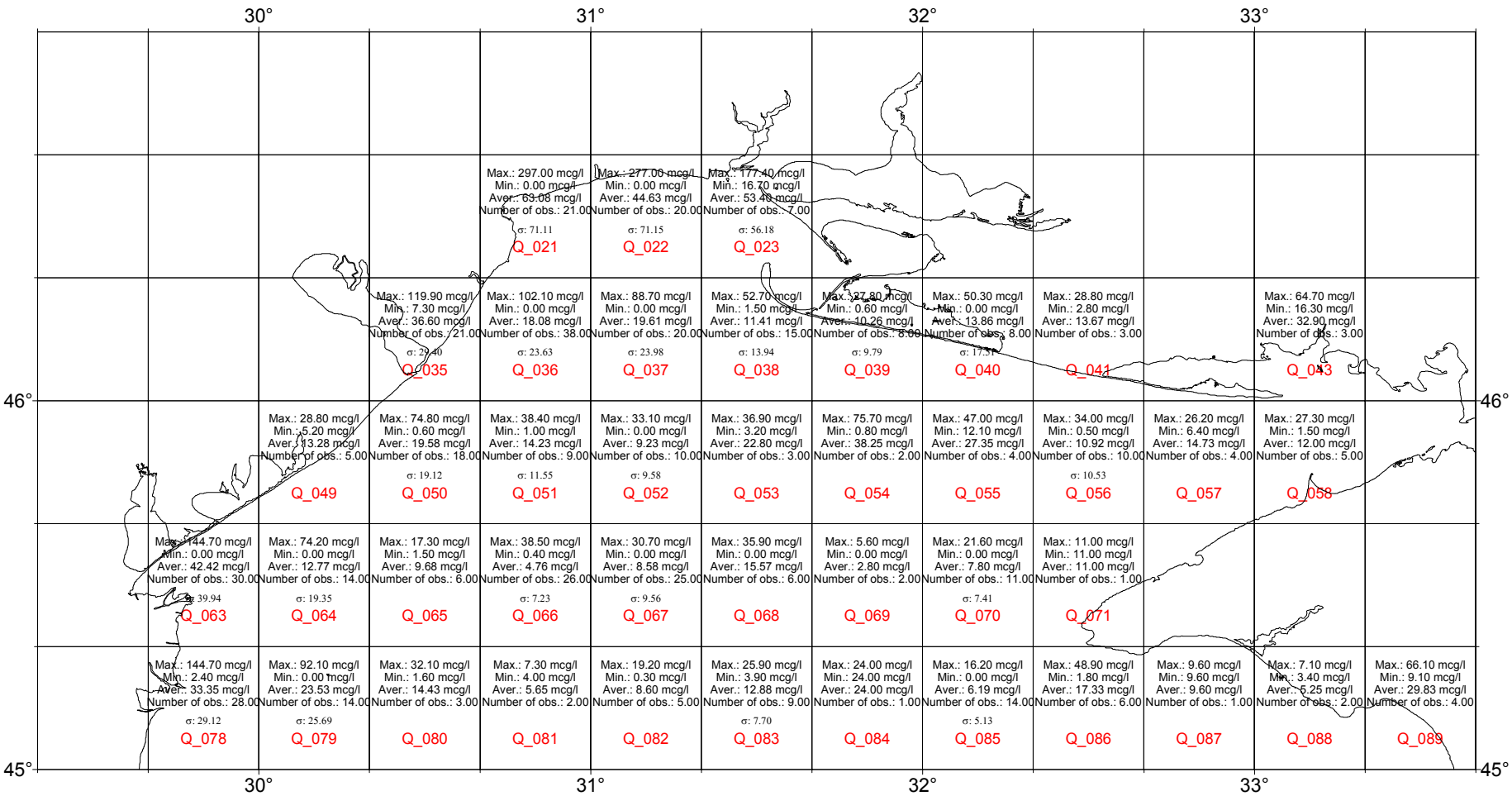

Fig. 2 Distribution of statistical characteristics of NH_4 in standard 20-minute squares (Northwestern part of Black Sea, bottom layer)

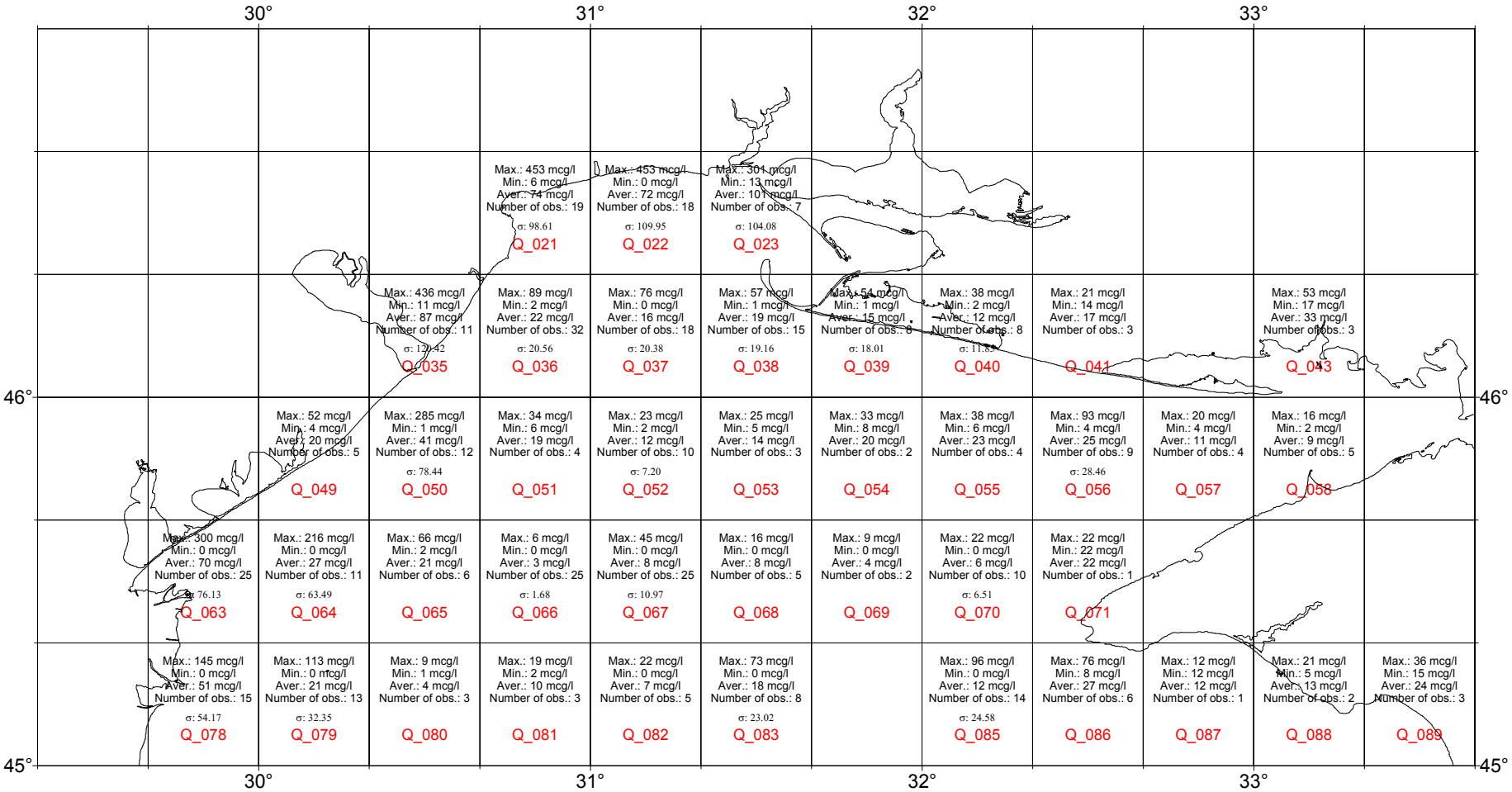

Fig. 3 Distribution of statistical characteristics of NO_2 in standard 20-minute squares (Northwestern part of Black Sea, surface)

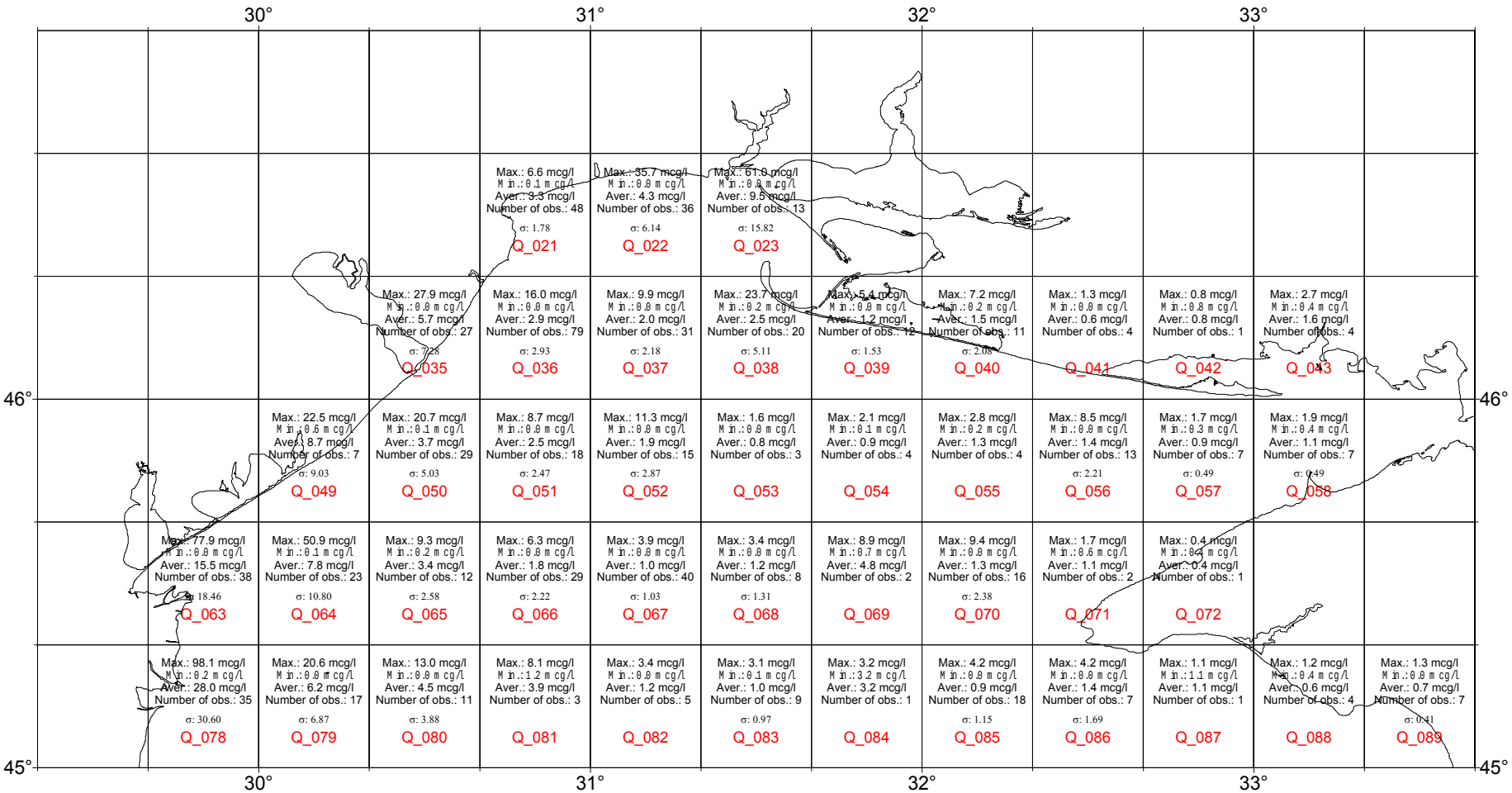

Fig. 4 Distribution of statistical characteristics of NO_2 in standard 20-minute squares (Northwestern part of Black Sea, bottom layer)

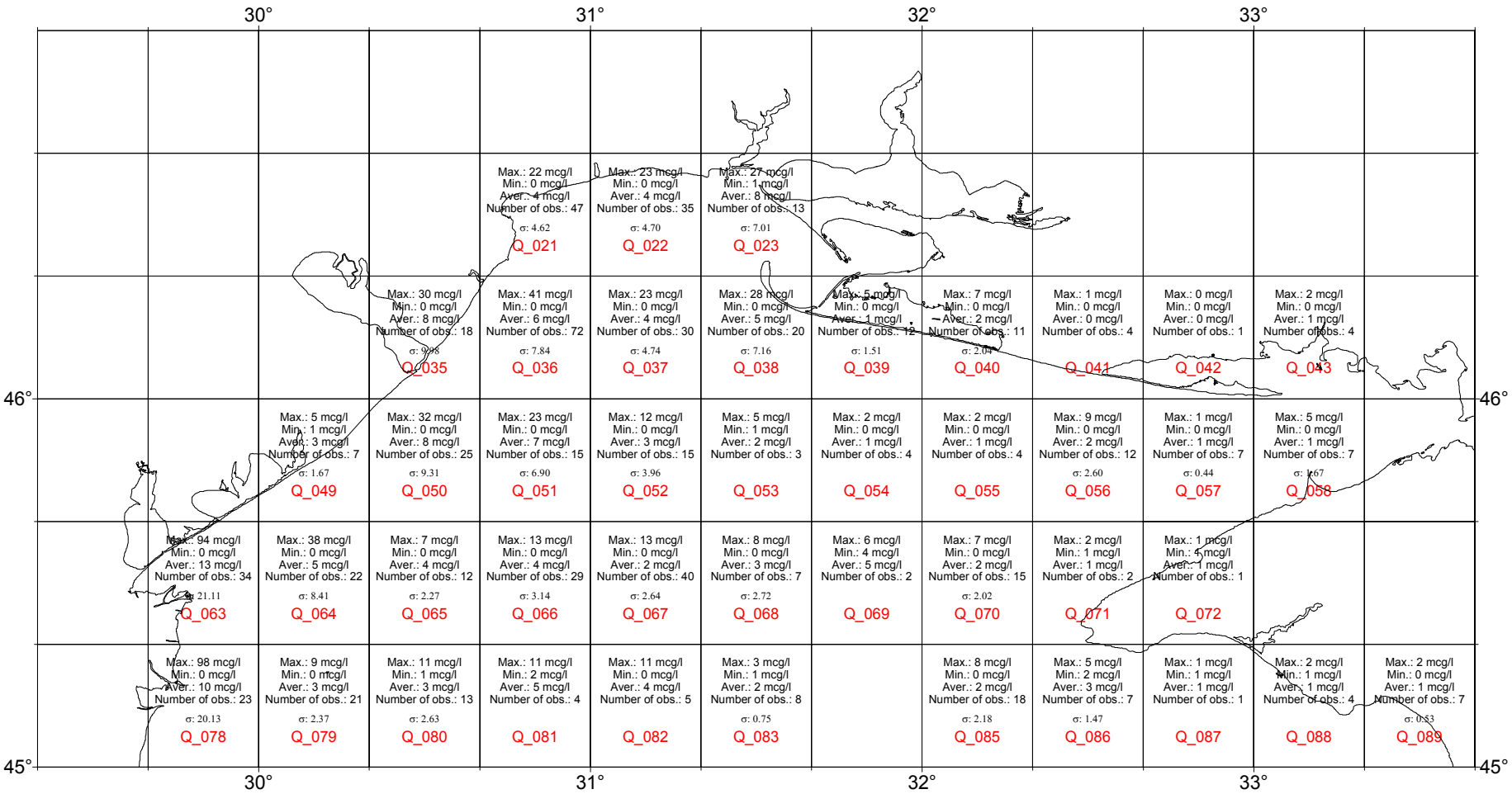

Fig. 5 Distribution of statistical characteristics of NO_3 in standard 20-minute squares (Northwestern part of Black Sea, surface)

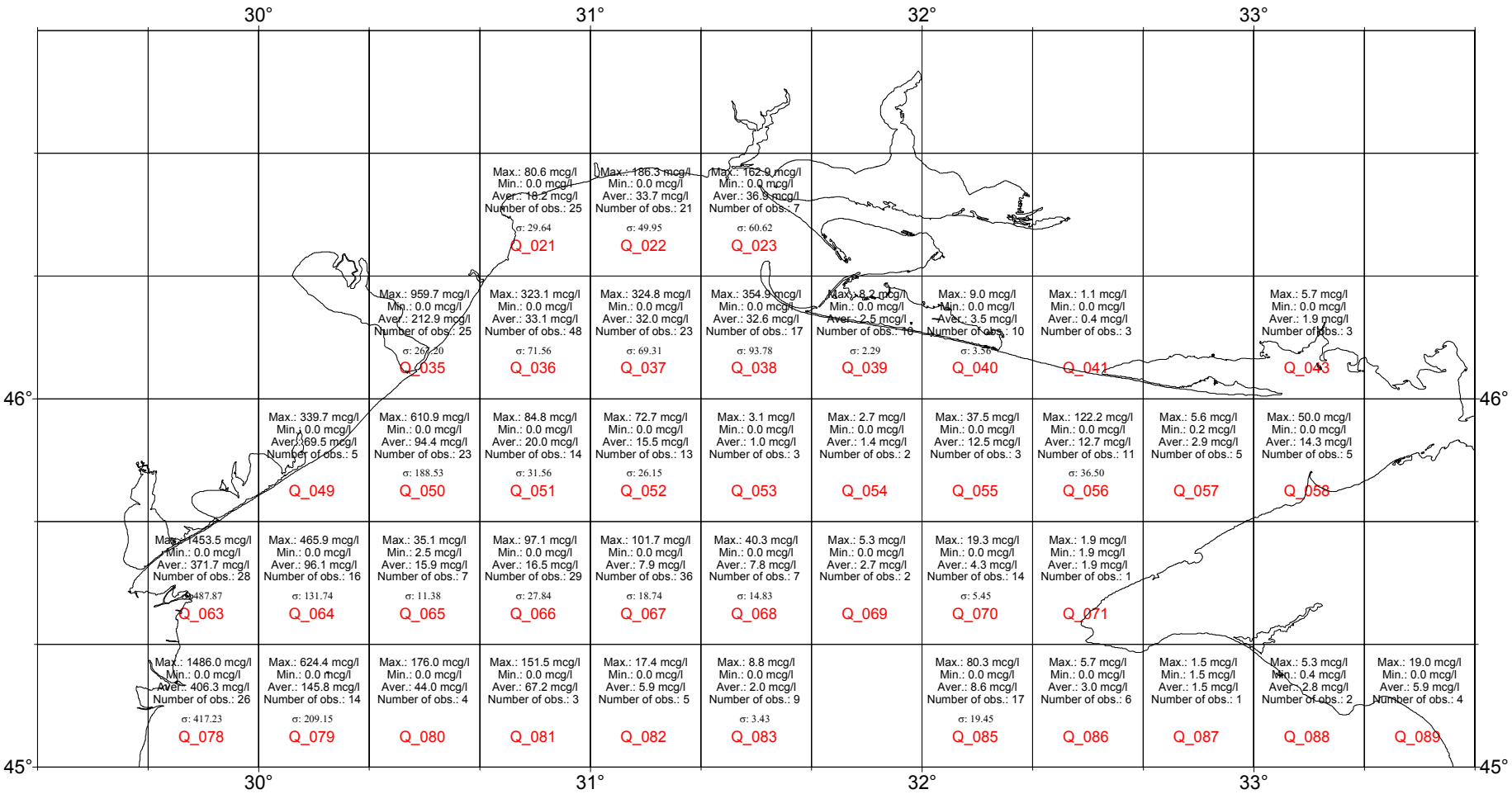

Fig. 6 Distribution of statistical characteristics of NO_3 in standard 20-minute squares (Northwestern part of Black Sea, bottom layer)

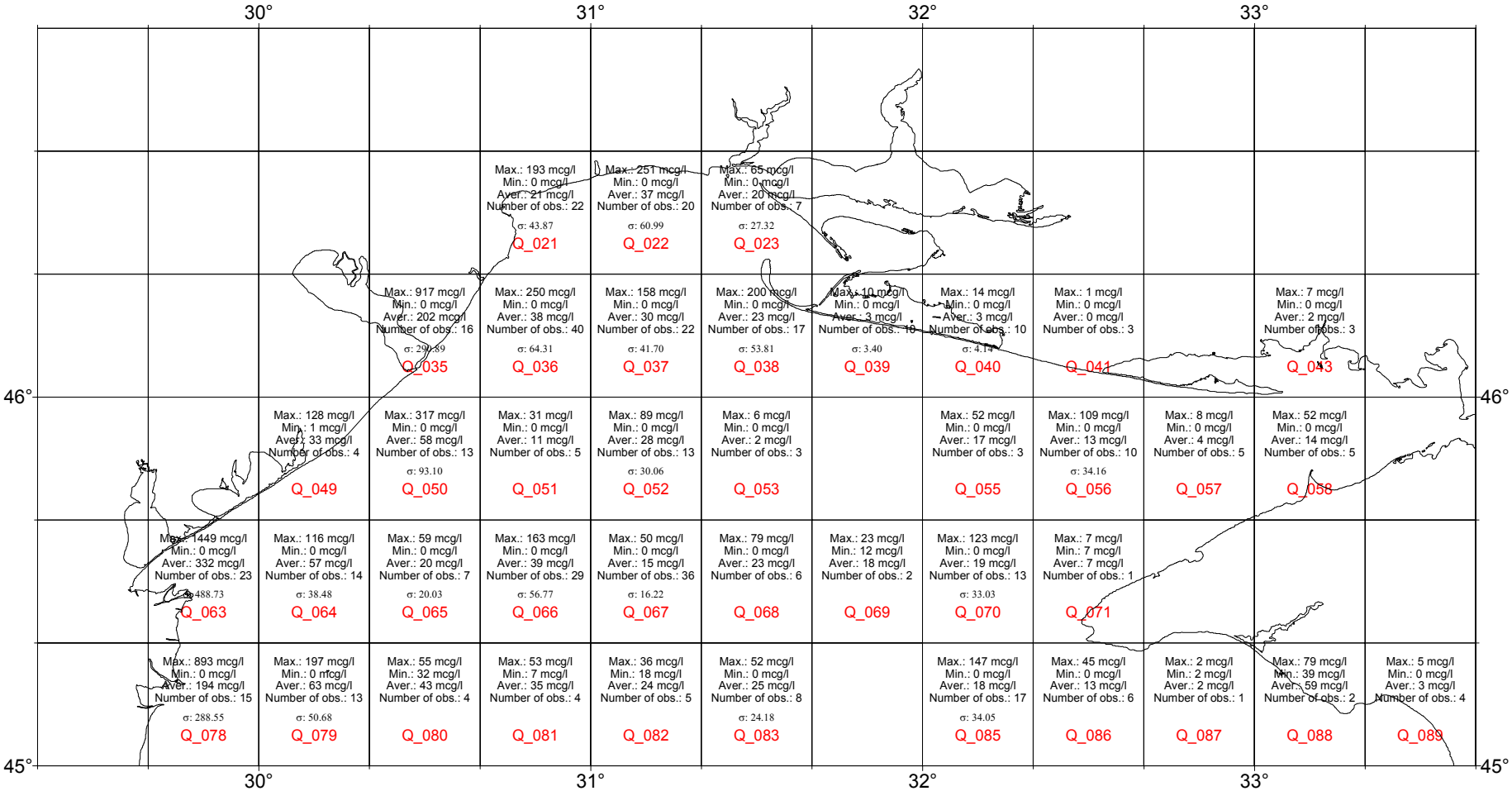

Fig. 7 Distribution of statistical characteristics of total nitrogen in standard 20-minute squares (Northwestern part of Black Sea, surface)

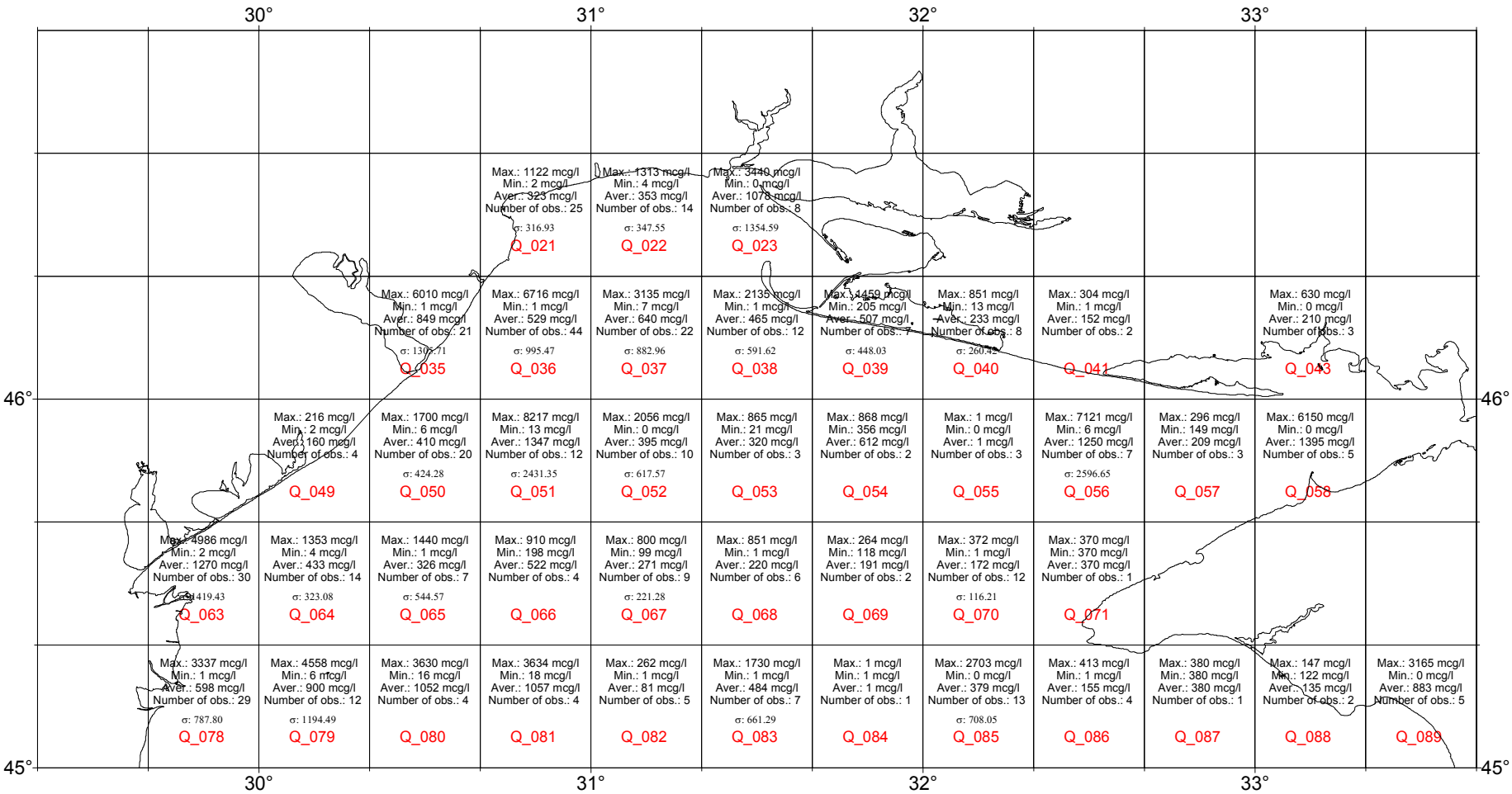

Fig. 8 Distribution of statistical characteristics of total nitrogen in standard 20-minute squares (Northwestern part of Black Sea, bottom layer)

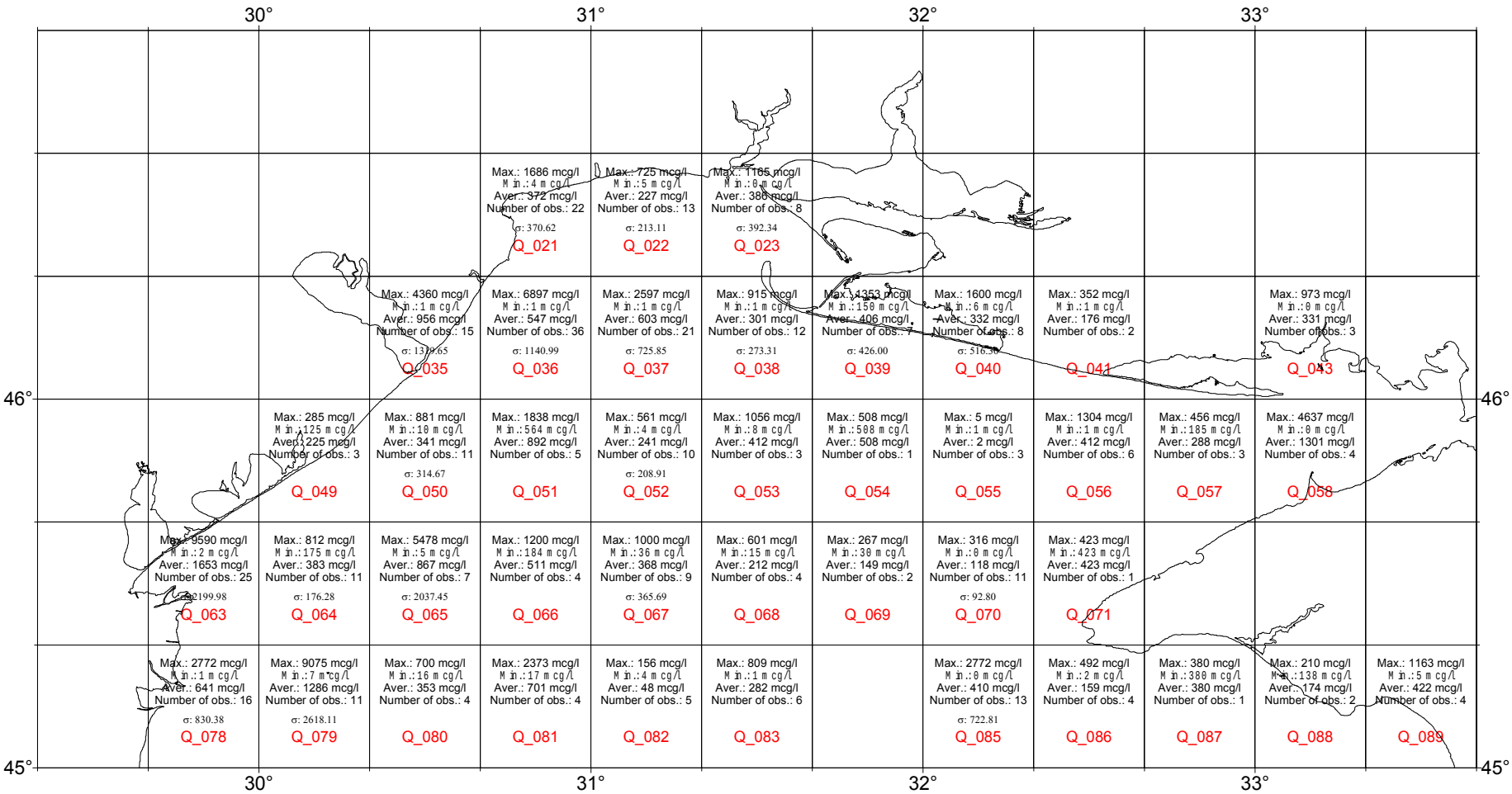

Fig. 9 Distribution of statistical characteristics of PO_4 in standard 20-minute squares (Northwestern part of Black Sea, surface)

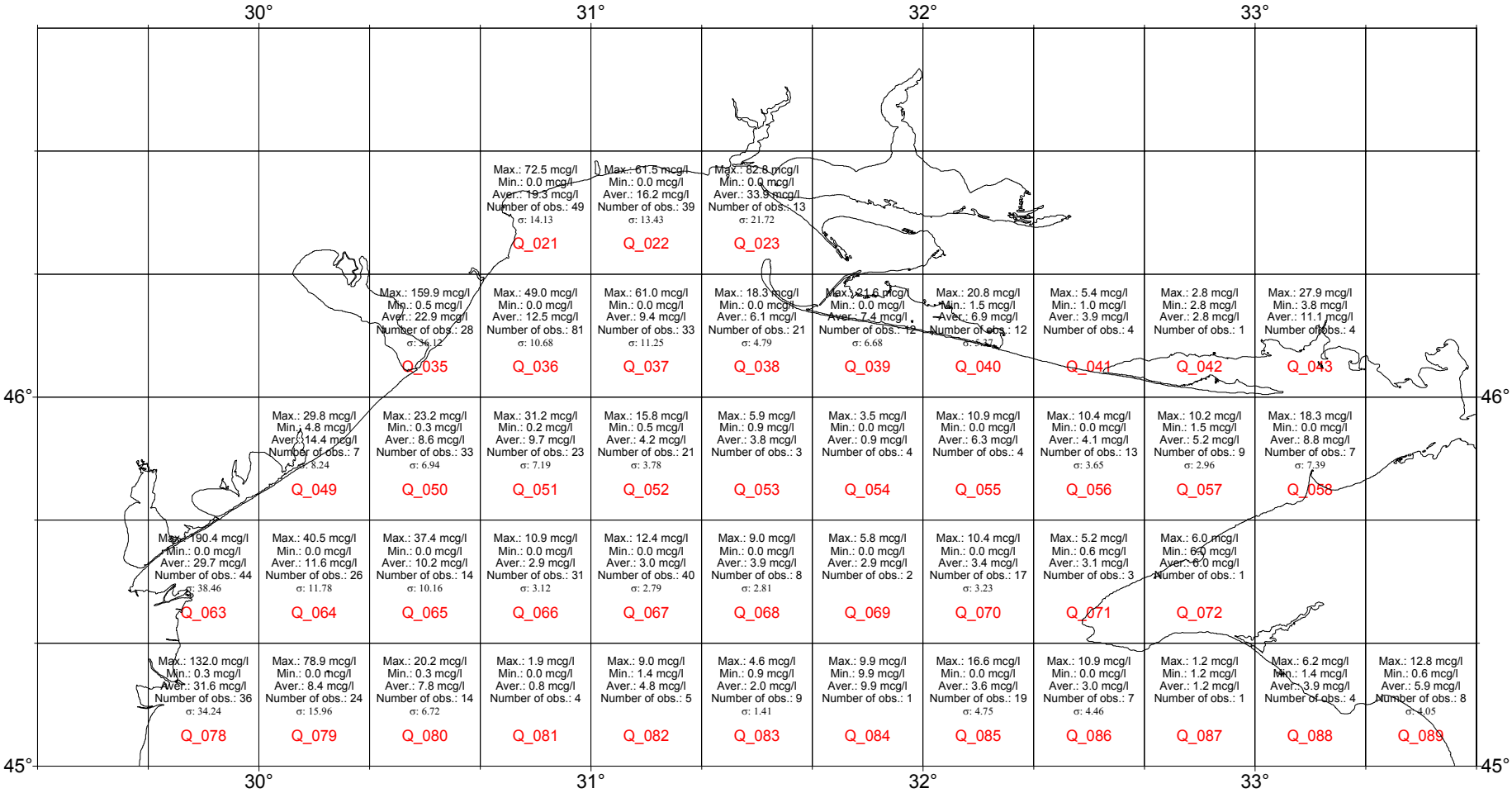

Fig. 10 Distribution of statistical characteristics of PO_4 in standard 20-minute squares (Northwestern part of Black Sea, bottom layer)

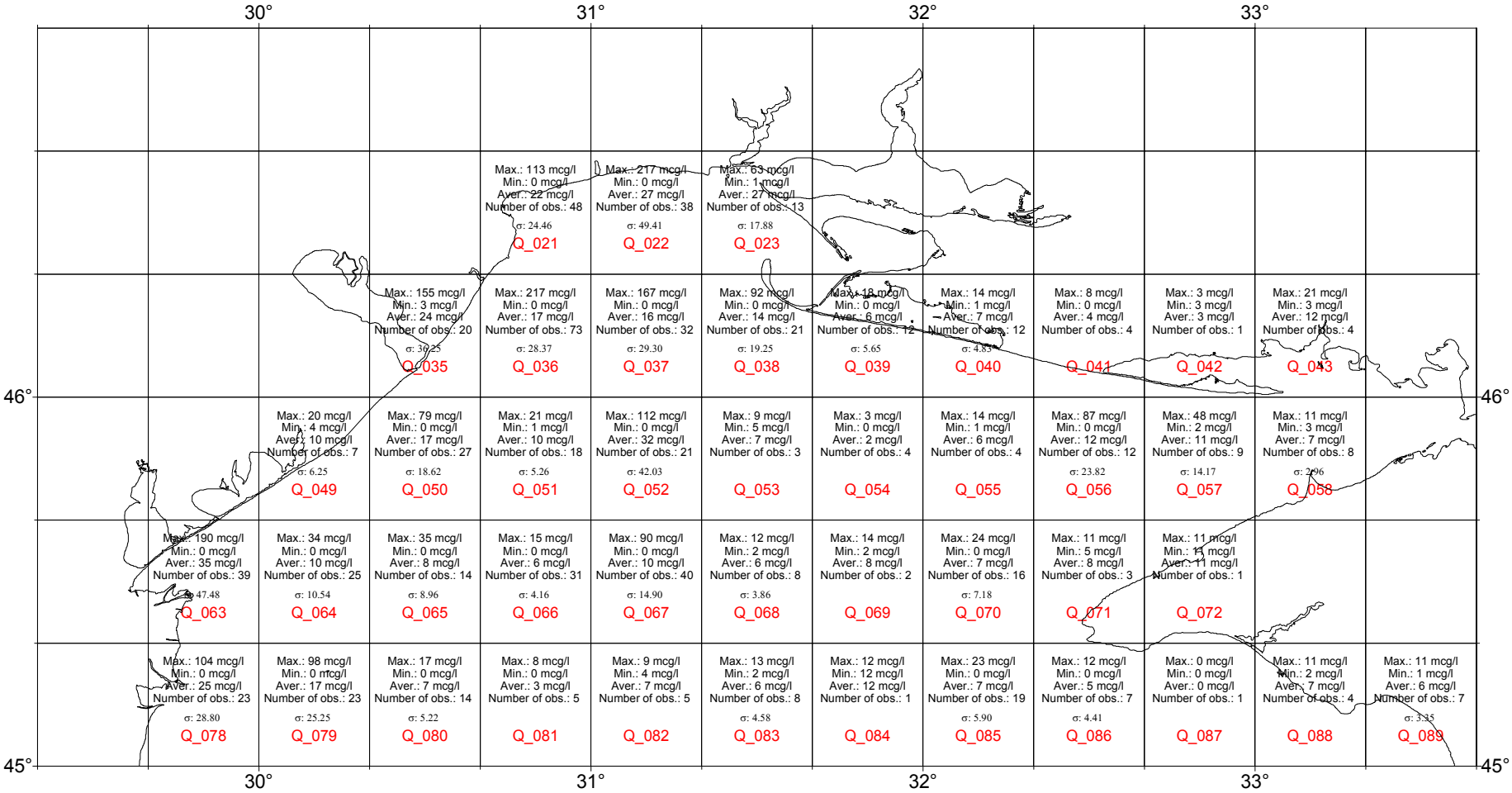

Fig. 11 Distribution of statistical characteristics of total phosphorus in standard 20-minute squares (Northwestern part of Black Sea, surface)

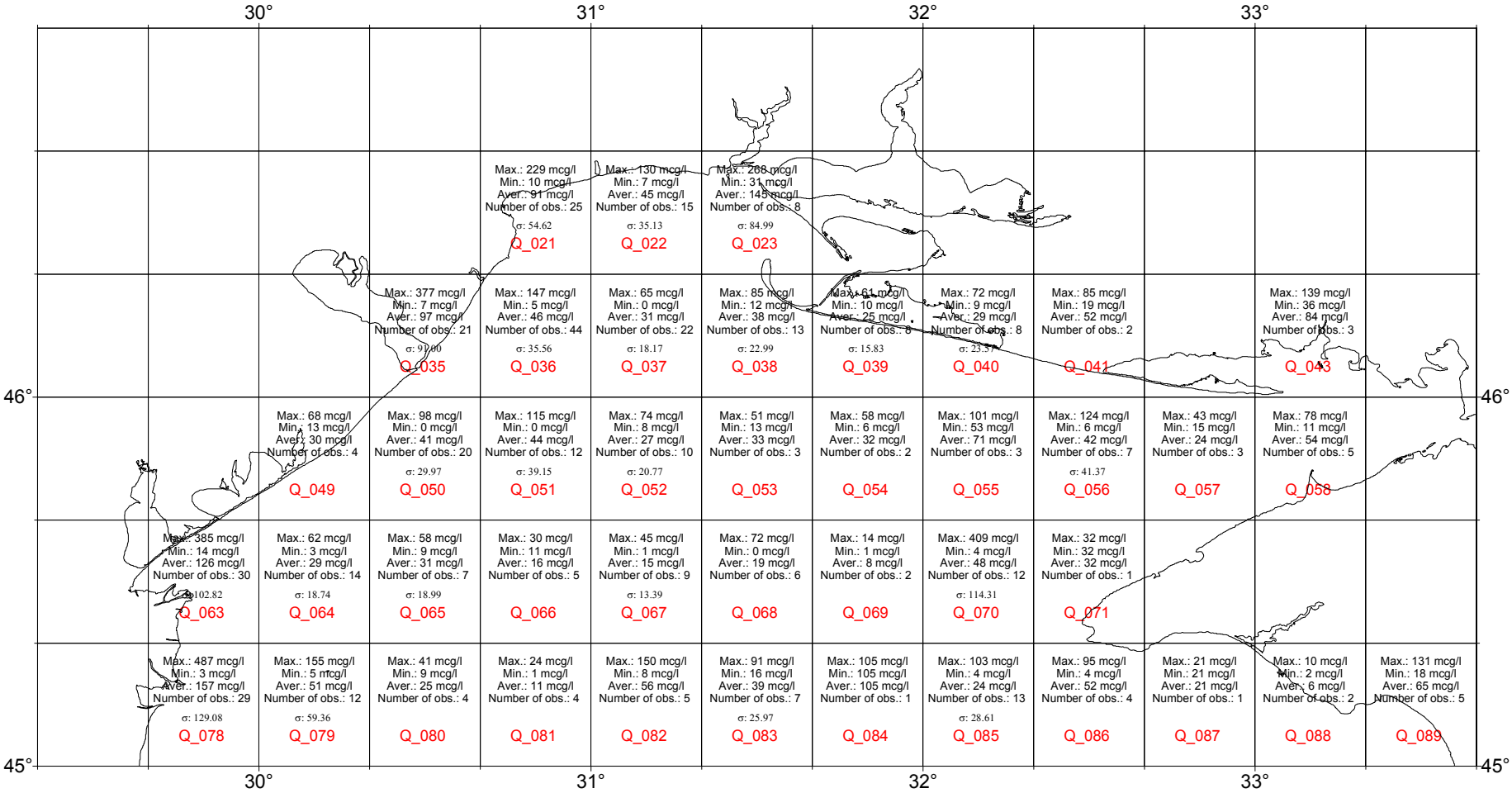
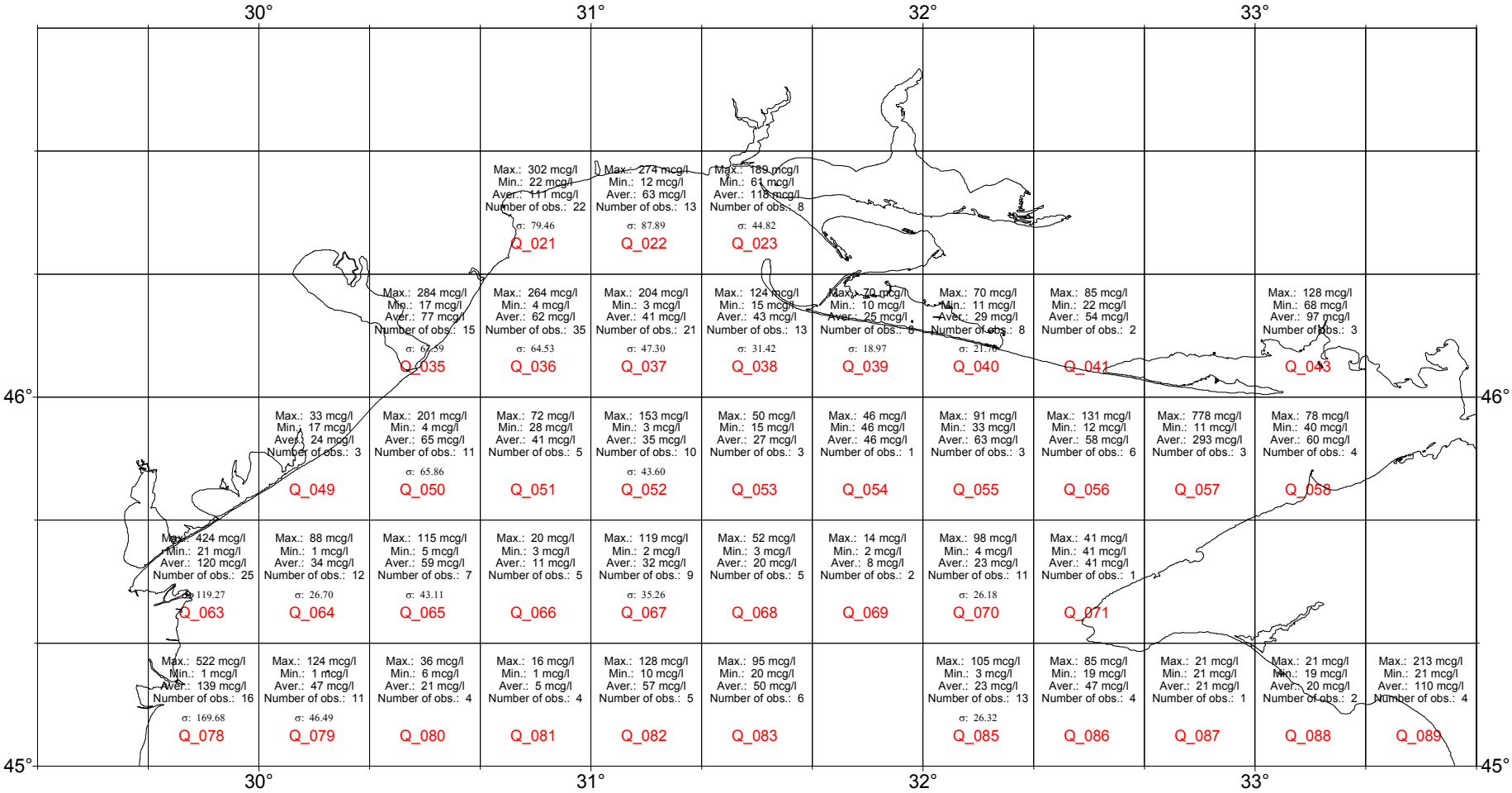
Fig. 12 Distribution of statistical characteristics of total phosphorus in standard 20-minute squares (Northwestern part of Black Sea, bottom layer)