

# THE SOVIET POLAR ENTERPRISE

## SOME PRELIMINARY RESULTS.

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Some preliminary results of the observations made on the drifting Soviet polar station are contained in articles supplied by the Soviet Union Year Book Press Service. Prof. V. SHULEIKIN, writing on currents and winds of the Arctic, says that the rate of drift of the ice is about three per cent of the velocity of the wind and that the drift deviated from the wind direction by so much as 45°. Further, he maintains that the pack-ice moves only by the action of the wind and that apart from the winds there were no surface currents observable in the Arctic Ocean. Thus there must obviously be a general prevalence of winds across the polar basin, for the observers are insistent that no sign of a circulatory movement of the floes within the basin was apparent. The East Greenland current is attributed to the persistence of north-west winds from the plateau of Greenland giving a southward movement, presumably in conjunction with the northward push of the ice due to the earth's rotation. It is said to be entirely a wind current.

Prof. N. ZUBOV points out that the conception of the Arctic as a region of continuous high pressure must be modified since cyclones penetrate to the region of the North Pole and bring relatively warm weather. If, however, the drift of the ice, which was principally to the south, is due solely to wind action it would appear that the wind must prevail from one direction and this may prove to be from the region of cold in north-eastern Siberia. There the radiation from a land surface results in lower winter temperatures than occur over the Arctic Ocean, where higher temperatures are maintained by the unfrozen water below the ice. The low pressure of the Greenland Sea in conjunction with this high pressure over north-eastern Siberia would no doubt account for a pressure gradient leading to these transpolar winds. Previous observations on the winter drift of pack-ice north of Asia show some correlation with the air current from the Siberian high pressure area. In summer, northerly winds on the Asiatic coast, due to a change in pressure condition, fray out the edges of the pack towards the south. Comparable northerly winds seemed to have driven the Soviet floe southward on the other side of the Pole in summer.

Prof. L. ZENKEVICH, writing on the biological results, has little to say so far, except to record that fauna has been collected at depths of more than 1,000 metres. This is more than four hundred metres below the ridge between Greenland and Spitsbergen. Thus it would appear that the deep Arctic fauna is completely cut off from the faunas of the Atlantic and Pacific basins, and may well contain faunas of great interest. Lastly, Prof. O. SCHMIDT foresees further exploration of the inner Arctic basin by this novel form of transport on drifting ice, the only suitable means that has so far been adopted. The new magnetic observations will be a great help to future aviators, both in placing and removing such parties of floating observers. Aerial transport between Europe and the Far East will also be facilitated.

