At 7 a.m. sounded in 325 fathoms, Hard Ground, bottom temperature 52°0 (Station Ia.), and at 9 a.m. in 730 fathoms, Hard Ground, bottom temperature 49°5 (Station Ib.). At 11 a.m. sounded in 950 fathoms, Hard Ground (Station Ic.), but the line carried away owing to a bad splice. At 11.30 a.m. put dredge over in about 1000 fathoms; it came up without mud at 4 p.m., having apparently not been on the bottom, but contained one small fish, some small Crustacea, and Pteropoda. Between Vigo Bay and Burlings Islands the tow-net was used. At night the sea showed luminosity due apparently to small Crustacea.

STATIONS IA. TO IC.

Position at noon, about 40 miles west of Cape Mondego; Burlings Islands distant 59 miles. Made good 86 miles. Amount of current 12 miles, direction N. 75° E.

Surface Organisms.—Crustacea and Pteropoda were obtained in the surface tow-net.

ORGANISMS FROM SURFACE-NETS.

Station ID. (Sounding 5), Cape Finisterre to Lisbon (see Chart 3).

STATION ID.

January 2, 1873; lat. 39° 55' N., long. 10° 5' W.

Temperature of air at noon, 57°3; mean for the day, 56°7.

Temperature of water at surface, 57° 0.

Depth, 1975 fathoms.

At 9 A.M. sounded in 1975 fathoms, but the line was carried away, owing to a bad splice, making the third sounding line and third thermometer which have been lost. At 10.30 A.M. lowered dredge in about 2000 fathoms, and commenced heaving in at 2 P.M. At 9.20 P.M. the dredge-rope was carried away, about 2000 fathoms of line being lost along with the dredge, which probably fouled something at the bottom, as there was a heavy strain on the line, and only a fathom or two could be hauled in at a time.

Position at noon, about 40 miles N.W. of Burlings Islands, coast of Portugal. Made good 30 miles. Amount of current 7 miles, direction S. 56° E.

The Challenger remained at anchor off Lisbon from 1 P.M. on January 3 till 5 P.M. At Lisbon. on January 12, 1873.

Stations II. and IIA. (Soundings 6 and 7), off the mouth of the Tagus (see Stations II. and Chart 3).

January 13, 1873 ; lat. 38° 10′ N., long. 9° 14′ W.

Temperature of air at noon, 54°·3; mean for the day, 55°·0.

Temperature of water at surface, 57°.0.

At 7.30 A.M. sounded in 470 fathoms, deposit Green Mud, containing about 40