

dwarfed cycadean stems or trunks which formerly went by the name of Cycadoidea, but which the Marquis Saporta (Paléontologie française, Végétaux, II.) now divides up into the two new genera, Bolbopodium and Clathropodium. From an examination of his figures, I am inclined to refer it to the latter of these genera. Although found at Golden, Col., which is cretaceous or Laramie, still it is not impossible that this specimen may have been in some way brought to this spot from a locality higher up the adjacent slope, having a position stratigraphically lower.

LESTER F. WARD.

The Greely search.

Safely assuming that *Science* admits within its domain facts only, and willingly dismisses errors of observation, I respectfully offer the following corrections of some inadvertences found in your notice, March 28, of the action of the Navy department, and its board of relief for Lieut. Greely.

It is an error to suppose that the report was founded, 'in great part, on the counsels of Capt. Nares and his associates;' for the joint letter of Nares, Markham, and Fielden, dated, as the report shows, London, Feb. 1, could not have been in the board's hands until nearly a month after their submitting that paper, the publication of which was delayed for these and other valued counsels.

The necessity of leaving the ice-navigation 'absolutely' to the judgment of the ice-navigators, that is, to ice-pilots, is also in this case a fallacy. Neither the whalers nor the sealers go north of 70° north latitude, and can have no knowledge of the ice movements in Kane basin, for action in which, the commanding officers are likely to gain as much knowledge as ice-navigators, so far as this can be gained in lower latitudes. Once in the basin, the whole problem depends on the judgment and skill of the officer, who must, by careful observation of the local tides and weather, determine when and where to advance. The writer of your notice has ignored the plain fact that the commander, as the only responsible person, must also be the absolute judge of the ship's movements among the most fickle of all known conditions, — the ice-changes. He must, almost without ceasing, be on the watch and in the crow's-nest. In that 'sort of tub,' Hartstene, when out in the search for Kane, "stayed for thirty-six hours on the stretch, with but a bowl of soup sent up to keep body and soul together;" and, according to Markham, Nares almost lived there, from the nest closely scrutinizing the ice motions, the tides, the currents, and the influence of the wind on the pack. "It was entirely due to this that the expedition advanced, although inch by inch." That an ice-navigator of the ordinary type should be equal to this watchfulness, is scarcely among the possibilities; and in this connection the experience of the Proteus is most unfortunately cited by your correspondent, if the captain of that vessel was correctly reported as being confessedly very rarely in the nest. Nor, in another point, is the case a parallel one, inasmuch as the needed naval qualifications could not be expected to be found in an army officer, however marked were his courage and admitted sagacity.

The statements in regard to the failure in providing for scientific observations, and as to the programme of the cruise, are equally at fault. The final decision of the programme for the expedition could not have been made at the date of the writing, and, indeed, has not yet been made known. From the nature of the case, much must be left to the discretion of the offi-

cer commanding; he must, as in the case of previous expeditions, sail 'untrammelled.' So far as opportunity shall offer for scientific observations, these will be made by the use of two complete scientific outfits, including photographic apparatus, carefully prepared for meteorological and magnetic work, if the ships should winter north. For this, as well as for previous expeditions, special instructions have been laid down by the department for such observations as will not interfere with the main object. The ships will take out three young officers of the number, which, under the sanction of Secretary Chandler, have been recently on duty at the Smithsonian, under training for just such work. They will be thus prepared to carry out the instructions of Professor Baird, so far as the ever-changing circumstances of the cruise shall permit.

May not the very grave responsibilities of this errand of mercy be intrusted to the department and its selected officers, conscious, as they assuredly are, of these responsibilities, and hoping for that success for which the hearts of the nation wait, as attested by the unlimited appropriation placed at the discretion of the president? When De Haven went out in the search for Sir John Franklin, Admiral Osborn openly said, "I was charmed to hear that officers and men signed a bond not to claim any part of the reward of £20,000 offered by the English government."

Unaware of the existence of any lower tone of character in those who now leave their homes on an errand of humanity, yet of grave uncertainty of success and of personal danger, I submit the preceding corrections, which might, indeed, be extended. They will commend themselves as due to the Navy department, to the officers, and to the mixed board from the army and navy, whose report itself evinces much previous arctic study, and close attention to the wants of the expedition.

J. E. NOURSE.

[The question as to whether an officer entirely without experience, and therefore necessarily without skill in meeting certain exceptional conditions, is as well qualified to do so as one who has gained skill by long experience, is one, which, divested of sentiment and class feeling can have but one answer. We are not aware that floating ice north of latitude 70° possesses any occult qualities which it loses on drifting south of that imaginary boundary. The skill and watchfulness of the ice-navigators of the sealing and whaling fleet is a fact which does not depend upon any one's opinion, but has been proved by long years of successful adventure. That the owners of this fleet should require some guaranty in case of success, for putting their property in jeopardy, for what many regard as a forlorn hope, is merely reasonable; and no just parallel can be drawn between them and officers of the navy, who have no pecuniary stake in the vessels to which they are temporarily assigned. The statement in regard to scientific work, 'not inevitable to the expedition' (like meteorological observations), was made on the best authority; and we shall be pleased to learn that the first intention of the commander of the expedition has been modified in the manner the writer intimates. That the counsels of Sir George Nares and others had great weight in determining the report of the board, we judged from internal evidence, and that the report was delayed until those counsels were made known, and because it would have been most reprehensible if they had not received respectful attention.]