

fidence on the subject, so far at least as my modicum of experience, thus acquired, extends. Of all the common fish of the Scottish seas, the spotted or lesser dog-fish bears, in proportion to its size, the largest brain; the gray or picked dog-fish ranks next in its degree of development; the Rays, in their various species, follow after; and the osseous fishes compose at least the great body of the rear; while still further behind, there lags a hapless class — the *Suctorii*, one of which, the glutinous hag, has scarce any brain, and one, the *Amphioxus* or lancelet, wants brain altogether. I have compared the brain of the spotted dog-fish with that of a young alligator, and have found that in scarce any perceptible degree was it inferior, in point of bulk, and very slightly indeed in point of organization, to the brain of the reptile. And the instincts of this Placoid family, — one of the truest existing representatives of the Placoids of the Silurian System* to which we can appeal, — correspond, we invariably find, with their superior cerebral development. I have seen the common dog-fish, *Spinax Acanthias*, hovering in packs in the Moray Frith, some one or two fathoms away from the side of the herring boat from which, when the fishermen were engaged in hauling their nets, I have watched them, and have admired the caution which, with all their ferocity of disposition, they rarely failed to manifest; — how they kept aloof from the net, even more warily than the cetacea themselves, — though both dog-fish and cetacea are occasionally entangled; — and how, when a few herrings were

* The Silurian Placoids are most adequately represented by the *Cestracion* of the southern hemisphere; but I know not that of the peculiar character and instincts of this interesting Placoid, — the last of its race, — there is any thing known. For its form and general appearance see fig. 49, page 177.