

zoöphytology the late lamented Dr. Landsborough has acknowledged in his interesting "History of British Zoöphytes." Further, it is worthy of remark that, just as the naturalist cannot now acquaint himself with all the animals or plants of Scotland in any single locality, so all the fossil species of any one formation cannot be exhausted in any one limited field or district, but must be sought for in various districts ere the list can be regarded as tolerably complete. The old Devonian species of fishes, like those of the present day, seem to have had their favorite haunts and feeding or spawning grounds, and must now be sought for where they congregated of old. The *Diplacanthus striatus*, for instance, is one of the commonest of the Cromarty Old Red fishes, and the *Dipterus* and *Asterolepis* very rare; whereas at Thurso, Mr. Dick, after years of exploration, never found a single spine of *Diplacanthus*, but not a few noble specimens of *Asterolepis*, and finely preserved skulls and jaws of *Dipterus*. And in a neighboring locality, Banniskirk, *Dipterus* is the prevailing fish, and may be found by scores. Again, the Old Red of Caithness generally is poor in specimens of *Pterichthys*,—the rocks of Thurso have not yet furnished a single specimen; whereas in those of Moray the genus is not rare; and in a quarry a few miles to the northeast of Stronness it is more abundant than any of its contemporaries. I mention these facts to show how necessary it is to the Palæontologist who sets himself to exhaust the organisms of a formation within even a single country, that he should either be a sedulous traveller, or have a widely-located circle of friends engaged with him as fellow-laborers in the work.

No ichthyic species of this Lower formation of the old Red Sandstone has yet been detected in Scotland to the south of the Grampians. In the great belt of Old Red which traverses the island diagonally, from the coasts of Kincardine and Forfarshire on the east, to those of Renfrew and Ayr on the west,