

MONDAY AFTERNOON POPULAR LECTURES.

ZOOLOGY.

IDEAS ON THE BEGINNING OF LIFE.

By J. Hallantyne.

(Read February 10, 1890.)

Organic life, as you all know, is arranged by naturalists into two great divisions, named respectively the vegetable and animal kingdoms, the last named of which being the subject matter of this paper.

To the ordinary observer the difference between plants and animals can be seen at once, as only the higher or more specialised forms are compared, but with the naturalist, who digs down into the lower forms of life, distinctions all but disappear, so that he finds it impossible to fix the point where the diverging lines of life really begin, or to say whether vegetable or animal life had precedence in the order of their beginning in the far distant past. Dr. Andrew Wilson, of Edinburgh, in his work "Chapters on Evolution," says: "In the lowest depths of plant life we may discover organisms which possess at the best a doubtful title to be regarded as objects of botanical study. In the animal world, likewise, are included lower organisms which may be regarded in certain aspects as possessing true relationship with plants. Modern biology to-day frankly admits its inability to pronounce whether certain lowest forms of life are animals or plants, certain 'monads,' for example, consisting each of a speck of protoplasm provided with microscopic whip-tails, exhibit a highly confusing identity of structure and function, which renders their exact nature indeterminable, or at least highly doubtful. Hence we discover that apparently at the lowest confines of the animal and plant realms, we enter a biological 'no man's land,' whereof the included inhabitants may legitimately claim relationship with both kingdoms. They exhibit in this latter respect, in the eyes of biologists, the actual survivals of that early epoch in the history of life's development when the specialized kingdoms of animals and plants were not, and when existence passed placidly along the common lines which were soon to diverge into two great series of living beings that environ our footsteps to-day."