definite changes usually occurred in the ovaries, and in many instances, ova ruptured and yolk material escaped into the abdominal cavity. The ovarian lesions were not found in those cases which developed septicemia and died very suddenly.

Ten healthy pullets were injected intraperitoneally with the entire yolk content of eggs laid by healthy hens. This was done in an effort to determine whether or not the possible rupture of a normal ovum would cause disease. The ten pullets failed to develop symptoms and autopsies on four revealed the fact that the injected yolk material was quickly absorbed.

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THE RÔLE OF BACTERIA AS FOOD FOR BOTTOM ANIMALS

IT has long been my opinion that we have not given bacteria sufficient credit for the part they play in the food supply of mud-flat and ocean-bottom animals.

Two Gephyrean worms of the species *Urechis caupo* Fisher and MacGinitie[1] were placed in rotted sea water and fed a culture of the bacterium *Pseudomonas* sp. for a period of 68 days. During this time these worms showed a growth which was greater than that usually occurring in nature. Two controls wasted away and died after 61 and 63 days, respectively.

Urechis caupo was used for this experiment, because it lives in mud-flat regions rich in bacteria and because it feeds by spinning a slime net, which intercepts all particles within the range of microscopic vision.

From the results of the above experiment it may be concluded that if a bottom animal can use a cultured bacterium as food and show normal or increased rate of growth, it seems safe to assume that when bacteria occur in the food of such animals in nature they are utilized in the proportion in which they occur.

The use of bacteria as a food supply offers possibilities for their use in rearing larvae for developmental studies and experimental embryology.

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SCIENTIFIC BOOKS

Wild Beasts To-day. By HAROLD J. SHEPSTONE.

I WAS constrained, not long since, to buy a book called, "Wild Beasts To-day" by Harold J. Shepstone, largely because it was an English book and because it had been well reviewed. English writers on natural history have, in the past, set for themselves a splendid standard, and I for one have for years been buying books on wild life by British writers with a sure confidence that an evening's reading would be a real pleasure. The tendency, so obvious on the part of some American writers, to capitalize at a high advertising value facts which are unknown to the average reader, though well known to scientific persons familiar with the literature of their profession—this tendency has been conspicuously absent in the case of English writers, and this has been no small factor in explaining the considerable sale in America of English books on popular natural history.

With this preamble I will now add a few observations on Shepstone's book.

It is thoroughly well made, light, type well chosen and with many excellent illustrations. Some chapters are well written, as that dealing with the London Zoo and Whipsnade, but the book at large so abounds in inaccuracies as to cause one to be bewildered that so great ignorance can exist in one who makes bold to write a book. We read (p. 69) the old, silly story that a twelve-foot alligator is from seventy-five to one hundred and fifty years old—it is more likely twenty. The author speaks of his friend Campbell controlling his unruly alligators "by means of a hypnotizing effect" (p. 78). We read of snapping turtle farms in Japan (p. 93), but the snapping turtle, by universal usage, is the American Chelydra. These Japanese turtles can also bite through a stout cane or bite off the blade of an oar (p. 85), which, of course, is pure nonsense. The fact that the blow of a green turtle's fin will break a man's leg (p. 87) will be a surprise to those who have handled green turtles. The famous snake farm at Butantan in Brazil is a serotherapeutic, not serotherapic, institute, as Mr. Shepstone repeatedly calls it (p. 91). On p. 95 we read that snake venom has a high curative value in medicine, and it is declared to be a cure for epileptic fits as well as beneficial for rheumatism and certain cases of insanity. This will cause surprise and rejoicing in medical circles. There is a South African snake called a ringhals, but no ringhal (p. 96). So also there is a town in Arizona called Tucson (pronounced "Tooson"), but no town called Tuscan, nor do I know

[1] For a complete description of the feeding habits and natural history of this worm, see *Ann. and Mag. Nat. Hist.*, Ser. 10, Vol. 5, p. 204, July, 1930.