

the ancients, but chiefly of a superstitious or ludicrously fanciful nature. They attributed to him good qualities which he did not possess and accused him of evils of which he was not guilty; as, for instance, medicinal and curative properties, and poisonous and venomous influences. They also had a legend to the effect that he carried a jewel in his head; but his real value as a help to successful agriculture was never mentioned, and it remained for a more scientific generation to demonstrate this fact.

The superstitious beliefs connected with toads are very curious, and it is still more so that they should exist in the minds of many even at the present day, and that to many people the toad is an object of loathing and disgust. Some of the strange fancies are, that touching a toad will produce warts on the hands, and, therefore, few persons like to touch a toad; another idea is that killing toads will produce bloody milk in cows; that a toad in a well will insure a constant supply of water, and one placed in a newly made cellar will bring prosperity to the household.

Toads however have now been discovered to possess useful qualities apart from all superstitious theories and beliefs; and in view of the legion of insect foes that beset their crops, the farmer and gardener will do well to follow up the studies of the scientists and see whether it will be worth their while to encourage the increase of a race of creatures which can do him no harm but, on the contrary, may prove a valuable ally in the warfare which must be actively prosecuted against the enemies which destroy his crops and render his efforts abortive.

We are apt to think that toads are scarce, and that the few we see cannot do much good. This may be accounted for by their not being gregarious; but the question is, are they not more plentiful than we imagine? The writer of the pamphlet alluded to states that he removed from a single female of average size 1279 ova, and, as she had commenced laying, this figure did not represent the total number of eggs.

Authentic records are in existence as to the longevity of the toad. One instance is given in which a toad lived thirty-six years and was then accidentally killed, and another was proved to have been twenty-three years in the same yard. There are numerous cases in which the same toads have been known to live for from eight to fifteen years.

There may be some basis for the belief that the toad is venomous, for under excitement, it ejects a colorless fluid from the skin, and it has been remarked that when dogs and cats have bitten a toad, they have afterwards manifested signs of considerable distress.

Toads although not gregarious hibernate in groups, and although cold benumbs, it does not kill them, and after they are apparently frozen they will revive when brought into a warm place. There is a difference between the hibernation of warm blooded animals; as for example, the bear, where the life functions are lowered yet still in action, and that of the amphibious reptiles and insects where these functions are entirely suspended.

But it is more to our purpose as affecting the economic value of the toad to notice his feeding habits, what his food consists of, and how he secures it. Toads do not take any dead or motionless object, only preying upon living and moving insects, snails or worms; the importance of this peculiarity is to be noticed as showing how valuable are his services.

The toad's tongue is his only organ for seizing his prey, and is admirably adapted for the purpose, it is capable of extension and is covered with a glutinous substance which adheres firmly to the object seized.

Toads seem to have a strong sense of locality, and have regular beats in which they search for food. On cool evenings, about sunset, the same fellows can be seen slowly hopping (1) about the garden walks, grass plots, road sides, or cultivated fields, seeking what they may devour.

In cities and suburban villages, their favourite haunts are the garden walls, and spots beneath electric lights. The writer, from whom we are quoting, states that he noticed on many occasions eight large toads seated under an arc light, watching for the insects to fall, which had been deprived of their wings and actively devouring them, until the electric current was turned off when they would retire to their hiding places.

The quantity of insects a single toad will consume is enormous. It has been verified, by examination, that in twenty-four hours, he has emptied and refilled his stomach four times, the food consumed being equal in bulk to four times

(1) We should say: frogs hop; toads crawl. Ed.