



First record of insect in chicken egg

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Abstract

A first record study of an insect found in chicken table egg. One individual table egg from a commercial market store in Baghdad city was found to have an insect inside it, the insect was died and the identification of this insect revealed that this insect is a species of Earwig (Female) and belong to the Order: Dermaptra, which have two identified family in Iraq; Forficulidae and Labiduridae. This is a first record of large insect was found in table egg.

Keywords: First record, Table egg, Abnormality, Insect, Earwig, Iraq.

Introduction

The normal avian egg is the product of coordinated function of reproductive organs and that anatomically perfect. A few abnormalities or anomalies of the egg is remarkable especially by domestic hen due to large number of eggs laid (Romanoff and Romanoff, 1949; Stadelman and Cotterill, 1995).

Many abnormalities appear to have no specific cause, but the incidence is much higher in hens subjected to stressful management conditions, rough handling, or vaccination during production. A significant increase in the number of soft-shelled eggs is also common as a result of viral diseases such as infectious bronchitis, egg drop syndrome, and Newcastle disease. Small eggs with no yolk form around a nucleus of material (residual albumen) in the magnum of the oviduct. Small eggs with reduced albumen and eggs with defective shells may be the result of damage to the epithelium of the magnum or shell gland. Very rarely, foreign material that enters the oviduct through the vagina (eg, a roundworm) may be incorporated into an egg (Rosales, 2013).

Occasionally reports are received of worms

inside chicken eggs, although considered such findings to be rare. It is thought that the ascarids migrated from the cloaca up the oviduct to a position anterior to the isthmus of the oviduct. Here they were incorporated in the albumen (Hall, 1945; Bigland and Graesser, 1961).

Although, no documented previous finding for insect founded inside hen egg, thus this is the first record of large insect founded in table egg.

Materials and Methods

A dozen of freshly chicken table egg (30 eggs) was purchased from local commercial market in Baghdad city at November 17th 2016, One individual egg brown shell, medium size over the dozen was found to contain an insect (Figures 1, 2 and 3), this insect was large and died. The shell of the egg was sound and no appears for crash or piped. Although the yolk was mixed with albumen, no off odor was smelled. The destination of the eggs were produced from commercial farm in Iraq.

Identification of this insect was carried out at the Entomology and Invertebrates Department, Iraq Natural History Research Center & Museum, University of Baghdad.



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Figures (1, 2 and 3): An insect (Earwig) found in table egg.

Results and Discussion

Identification of this insect revealed that this insect is a species of Earwig (Female), and belong to the order: Dermaptra, which have two identified family in Iraq; Forficulidae and Labiduridae. Six species of the family Forficulidae were identified: *Anechura bipunctata* Fawcett, *Euborellia annulipes* Lucas, *E. moesta* Serville, *Forficula auricularis* L., *F. lucasi* Dohrn, *F. lurida* Fischer. While one species of the family Labiduridae was recognized: *Lubidura ripara* Pallas (Derwesh, 1965; Azwar and Al-Omar, 1974; Abdul-Rassoul *et al.*, 1978).

The common Earwigs, is an elongated flattened brownish colored body, with a shield-shaped

pronotum (White and Borrer, 1987). Both sexes have these pincers; in males they are large and very curved, whereas in females they are straight. They are about 12–15 mm long. The antenna consists of 11–14 segments, and the mouth parts are of the chewing type (Fulton, 1924; Buckell, 1929; Helfer, J.R. 1963). Larvae or 'nymphs' are similar to adults in appearance, but their wings are either absent or small (Figure 4).

Labiduridae, characterized by their modified cerci as forceps, and light tan color, they are more commonly known as the striped Earwig, due to two dark longitudinal stripes down the length of the pronotum (Choate, 2009; Tawfik *et al.*, 1973).



Figure (4): Male and female common Earwigs, Forficulidae (Krutch, 2016).

Inclusion of foreign substances causes internal abnormalities of the egg included blood spots, meat spots, worms and parasites (Romanoff and Romanoff, 1949; Stadelman and Cotterill, 1995). In addition to the type of inclusion already mentioned, a wide variety of miscellaneous objects both organic and non-organic have been found in eggs, some studies mentioned pebbles, bits of sand, insects, feathers, horsehair and even coffee bean. These are conceivably forced up into the oviduct from the cloaca and inanimate foreign bodies of extraneous origin are probably picked up when part of the hens oviduct is everted as an egg is laid and are then passed up the oviduct by means of anti-peristaltic contractions (Romanoff and Romanoff, 1949).

We thought or suggested that this insect

(Earwig) inter into chicken body through cloaca any way and migrated from the cloaca up to the oviduct to the position of magnum or isthmus of the oviduct, here it was incorporated in the albumen and yolk and died, then egg membranes and eggshell were deposited.

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