

# An **Eastern Bluebird** Quiz for Advanced Avian Aficionados

[answers are based primarily on ***Studying Eastern Bluebirds: A Biologist's Report and Reflections***, by Dr. David Pitts]

Bluebird Question No. 1:

(True or False)

Bluebirds select a mate for life and are always monogamous.

# Answer

False.

Although bluebirds are *usually* monogamous during a nesting season, there are many documented cases of polygamous males having more than one mate at the same time, in the same nesting territory (a situation avian biologists call polygyny). In other instances, DNA studies have confirmed that bluebird nestlings within the same brood have been fathered by different males.

Bluebird Question No. 2:

(True or False)

Due to fewer physical demands and less stressful lives,  
male bluebirds live longer than females.

## **Answer**

False.

Based on recoveries of dead (banded) bluebirds, the life spans are essentially the same.

Bluebird Question No. 3:

How long does the average bluebird live?

# Answer

Based on cumulative data at the USGS  
Patuxent Bird Banding Lab (1920-1990), Dr.  
David Pitts determined the average life span  
is 499 days  $\approx$  17 months.

## Bluebird Question No. 4:

To date, how old was the oldest recovered (banded) bluebird?



## **Answer**

Ten years, six months

(According to the USGS Patuxent Bird Banding Lab, the bluebird was banded in New York on May 23, 1989 and found dead on November 30, 1999 in South Carolina)

## Bluebird Question No. 5:

How much does the average healthy bluebird weigh? (You may give your answer in English units *or* metric units of measure.)

## Answer

The average bluebird weighs about 1 oz., *or* 28 g (28-30g is a good answer). For comparison purposes, that is equal to the weight of 10 pennies *or* 28 average-sized paper clips.

## Bluebird Question No. 6:

During which season (Spring, Summer, Fall, Winter) are healthy bluebirds at their *greatest* weight?

# Answer

## Winter

Based on the weights of bluebirds Dr. Pitts captured during a study he conducted from 1985 to 1989---at different times of the day and in all kinds of weather---the birds gained weight in December, reached a peak body weight in January, maintained this weight through February, and then quickly lost weight in March.

Bluebird Question No. 7:

What nest box color (exterior) do bluebirds prefer?

## Answer

Based on a limited number of scientific studies, bluebirds seem to show no preference for any particular nest box color for the exterior of the box. (Interestingly, in some of his experiments, Dr. Pitts discovered that bluebirds seem to prefer nest boxes with *light-colored interiors*.)

## Bluebird Question No. 8:

In terms of temperature, which nest box is best for bluebirds: a *black* one, a *white* one, or an *almond-colored* one?



## Answer

If a box must be painted, a *white* one is best...it reflects more sunlight. A black nest box absorbs sunlight---and internal temperatures may therefore become too hot for eggs and/or nestlings---while an almond-colored box would have intermediate Internal temperatures.

## Bluebird Question No. 9:

What is the average temperature (in degrees Fahrenheit) of bluebird eggs being incubated by a female bluebird --- under natural conditions?

## **Answer**

93 degrees Fahrenheit

(The normal body temperature of a bluebird is 106 degrees Fahrenheit, and the female transfers heat energy from her body to the eggs through her brood patch---an abdominal area where blood vessels are close to the surface of the skin.)

Bluebird Question No. 10:

How hot (in degrees Fahrenheit) can a bluebird egg get without the embryo dying?

## **Answer**

If the egg temperature rises above 105 degrees, the embryo will probably die.

## *Bonus* Bluebird Question:

During its two-week incubation period, does a bluebird egg *gain* weight, *lose* weight, or stay the same?

## Answer

It loses weight. During incubation, oxygen moves into the egg through dozens of tiny pores in the shell, and water vapor and carbon dioxide travel out. It is primarily the loss of water that accounts for the overall weight loss.