

## **Rock Dove: *Columba*** ***livia***

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Class: Aves  
Order: Columbiformes  
Family: Columbidae  
Genus: *Columba*  
Species: *C. livia*  
Common Name: Rock Dove or  
Common Pigeon



**Description:** The Rock Dove (*C. livia*) has a dark blue-gray head, neck, and chest with yellow, green, and red-purple iridescence along its neck and wing feathers. Females of this species can be distinguished from the males by their lower levels of iridescence than the males. This species possesses two dark bands across the wings and one blue-gray band across the tail, seen in most pigeons. However, Rock Doves and feral pigeons can be divided into a large number of different phenotypes based on outward characteristics and colorations.

**Size:** Adults are 29 to 37 cm (11 to 15 in) long with a 62 to 72 cm (24 to 28 in) wingspan.

**Habitat:** Rock Doves can be found in a number of different environments and ecosystems all over the world. Wild Rock Doves tend to nest in crevices along rocky seaside cliffs, close to agriculture or open shrub vegetation. Feral Rock Doves tend to live alongside humans, and in cities skyscrapers usually replace their natural cliff surroundings.

**Behavior:** Rock Doves gather in medium to large flocks, spending their time on the ground searching for food. This species feeds in the early morning and in the mid-afternoon on the open

ground and eats primarily seeds. Female Rock Doves need to eat a diet somewhat higher in protein and calcium in order to have the nutritional resources to lay eggs.

Feral flocks of Rock Doves have been known to roost on the sides of buildings, walls or statues in urban settings. They are most often seen during daylight, seeking cover at night and during the heat of the day, according to the climate. While this species flocks while feeding, roosting and sunning, no play has yet to be observed between individuals. When alarmed, the flock may suddenly fly into the air and circle several times before coming down again.

**Reproduction:** Pairs of Rock Doves may be formed any time throughout the year, and these pairs are for life. Each bird works cooperatively on most aspects of reproduction and young-rearing. The male builds the nest, and females lay the eggs which are laid shortly after the nest is finished. Both males and females incubate the eggs which hatch approximately 19 days after being laid.

**Intelligence:** While seemingly common, it has been proven that Rock Doves possess remarkable intelligence which has been used for both research and military benefit. During the 1940s doves in a laboratory had proven the ability to pick out certain shapes and colors in exchange for food. With this knowledge, Navy scientists used conditioning to train doves to conduct search and rescue from Coast Guard helicopters. The doves were 93 percent accurate at locating objects floating at sea and their false positive rates were extremely low, whereas their human counterparts were accurate only 38 percent of the time.

Aside from military use, dove intelligence has been studied in relation to art. Doves successfully learned to discriminate color slides of paintings by Monet and Picasso. In addition,

these doves were able to discriminate paintings between these two artists, even if they had never been presented previously during training.

The most famous example of dove intelligence is the Skinner box, named for scientist B.F. Skinner who designed a series of experiments to test their ability to reason. The pigeons were taught to reply to questions by pecking at four different keys. A correct response was automatically reinforced with a pinch of grain. This technique has been extrapolated to different experiments including having doves distinguish between different human facial expressions.

**Sources:**

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