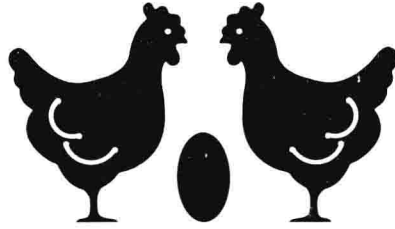


# POULTRY MEAT AND EGG PRODUCTION

Carmen R. Parkhurst  
George J. Mountney



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Carmen R. Parkhurst

Department of Poultry Science  
North Carolina State University  
Raleigh, North Carolina

George J. Mountney

United States Department of Agriculture  
Cooperative State Research Service  
Washington, DC

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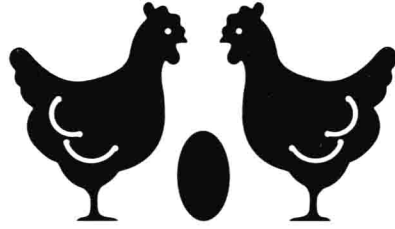
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# Preface

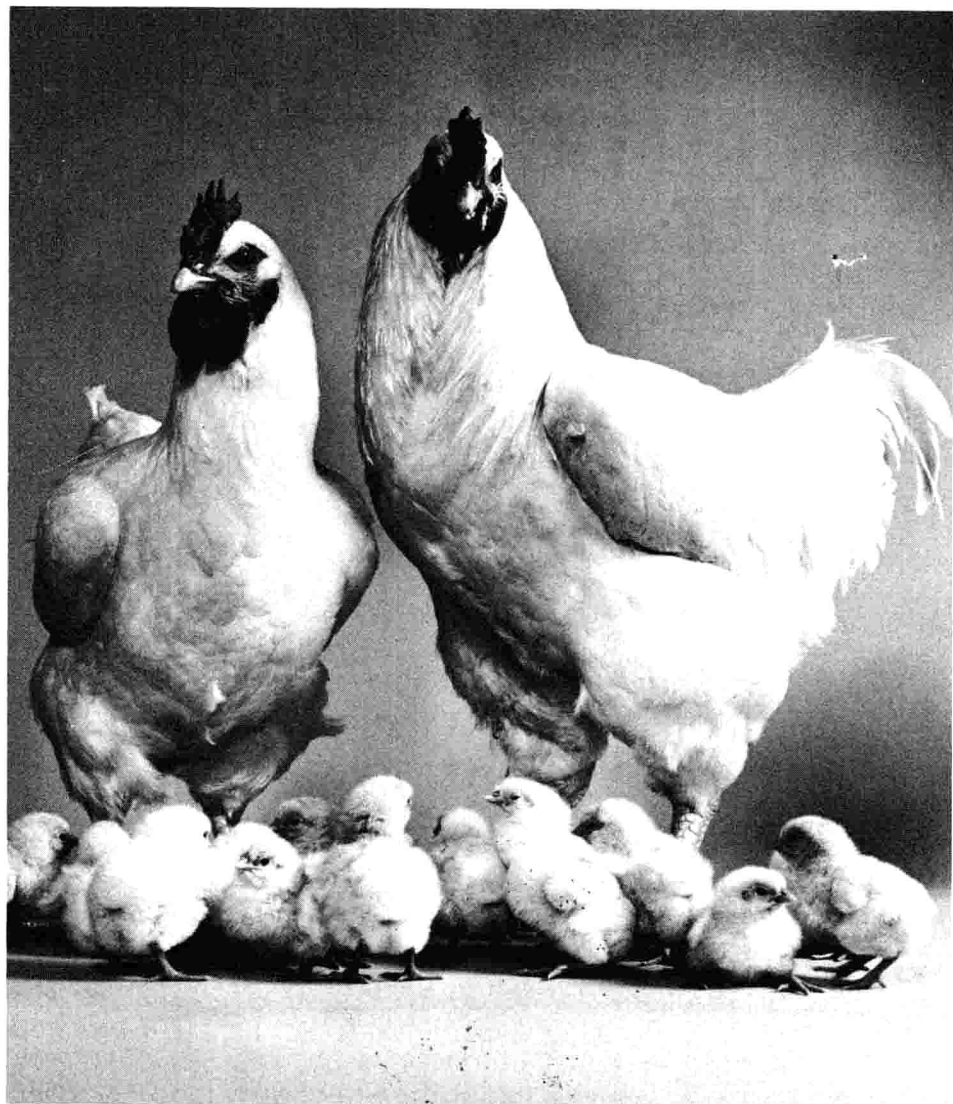
*Poultry Meat and Egg Production* has been prepared primarily for use as a text for students taking their first courses in poultry management. The general overall science and production practices currently in use in the industry have been characterized and described so that the student can gain insight into the industry. Reading portions of chapters before the lecture discussions and laboratory sessions will be helpful in giving students an understanding of the material. Also, this gives the instructor an opportunity to emphasize in the lectures areas of current concern in the industry, and to present topics of his or her choice in greater detail.

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POULTRY  
MEAT AND EGG  
PRODUCTION



*To Dr. Robert E. Cook,  
Former Head, Department of Poultry Science,  
for his encouragement, patience, and understanding  
during the time we wrote this book.*

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# The Poultry Industry

## INTRODUCTION

The term poultry is used collectively to designate those species of birds that have been domesticated to reproduce and grow in captivity and that render products of economic value. Chickens, turkeys, ducks, geese, some quail and pheasants, guineas, and pigeons generally meet the above criteria. They provide meat, eggs, feathers, fertilizer, animal food, and other by-products such as pharmaceuticals. They also serve as laboratory animals for scientific research. Birds kept only for companionship or beauty are not considered poultry.

## BIOLOGICAL CLASSIFICATION

Chickens belong to the genus *Gallus* of the family Phasianidae. Chickens along with closely related families make up the galliformes or gallinaceous birds, which are terrestrial, chickenlike in appearance being heavy bodied, short duration flyers, scratching seed and insect feeders, and ground nesters with precocial (the young are hatched down covered and are able to feed and move about by themselves)

young. This group of birds (Galliformes) includes chickens, turkeys, guineas, peafowl, and quail to name the common ones.

The domestic chicken is *Gallus domesticus* and likely had its ancestry in the red jungle fowl *G. gallus* that originated in southeast Asia. Other species of wild jungle fowl include *G. sonnerati*, the gray jungle fowl, *G. lafayetti*, the Ceylonese jungle fowl, and *G. varius*, the green jungle fowl.

## DOMESTICATION

It appears that people probably domesticated chickens over 4000 years ago, after centuries of hunting the wild jungle fowl for food. The early domesticated fowls were also used in religious ceremonies dedicated to the sun. In ancient India these chickens were sacrificed to the sun god.

Cocks were pitted together in fights originally as a kind of fertility ritual as an attempt by primitive peoples to ensure many children, bountiful crops, and adequate livestock.

Chickens then probably spread through eastern Asia. They reached Persia about 1000 B.C. and played a role in their ancient religion. By around 500 B.C. chickens were raised by the Greeks for the "sport" of cockfighting; however, the Romans were probably the first poultrymen. They used chickens in religious ceremonies, predicting the future through the reading of the livers by the horoscopes. They also made prophecies by offering feed to sacred chickens. Hearty appetites predicted success; ignored food or listless pecking was a harbinger of failure and doom. A flock of sacred chickens became a part of many Roman general's field equipment. The chickens were fed or fasted

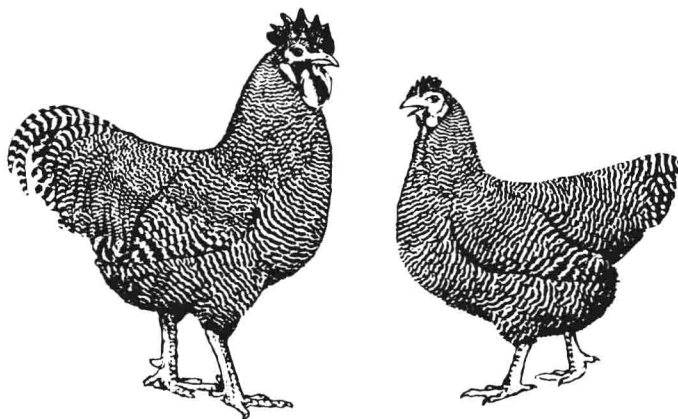


FIG. 1.1. Barred Plymouth Rocks. An example of the American class. (Drawing by J. L. Skinner.)

according to the whims of the general to control the morale of the troops.

The Romans also kept and bred chickens for food. They designed and built poultry houses and recognized the need for good sanitation. They were the first to fumigate poultry houses by using the fumes of burning pitch and sulfur.

## AMERICAN POULTRY ASSOCIATION CLASSIFICATION

At the present time the American Poultry Association lists and classifies 300 different recognized breeds and varieties of chickens in its book, "The American Standard of Perfection." Most of these birds are kept for competition in poultry shows or as pets. They are classified into classes, breeds, and varieties.

Birds classified in the same class have a common origin. Those in the same class with the same general physical features such as body shape or type, skin color, number of toes, and feathered or unfeathered shanks are classified as breeds. Breeds are subdivided further into varieties, which are based on plumage color, comb type, and the presence or absence of a beard or muffs.

The American class (Fig. 1.1) includes many of the chickens commonly seen on farms before World War II. They were bred to forage and survive on farms with a minimum of care. Such birds as Rhode Island and New Hampshire Reds, White and Barred Plymouth Rocks, Wyandottes, and Jersey Giants are included in this class.

Most chickens in the Mediterranean class (Fig. 1.2) originated in Italy or Spain. Birds in this class are known for their active, nervous

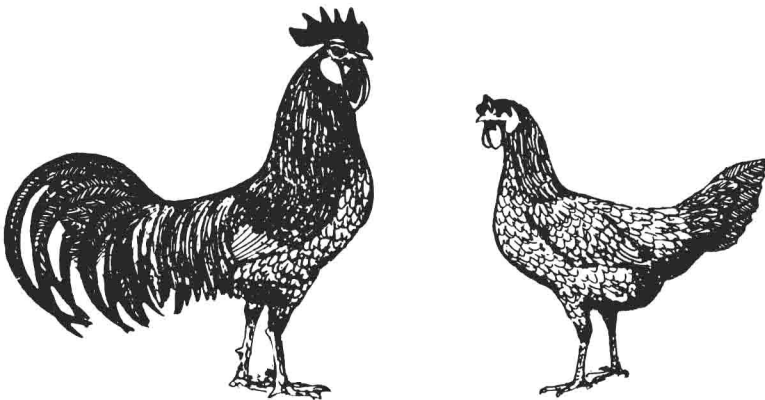


FIG. 1.2. Blue Andalusians. An example of the Mediterranean class. (Drawing by J. L. Skinner.)