



PROVINCIA DI UDINE

ASSESSORATO CACCIA E PESCA



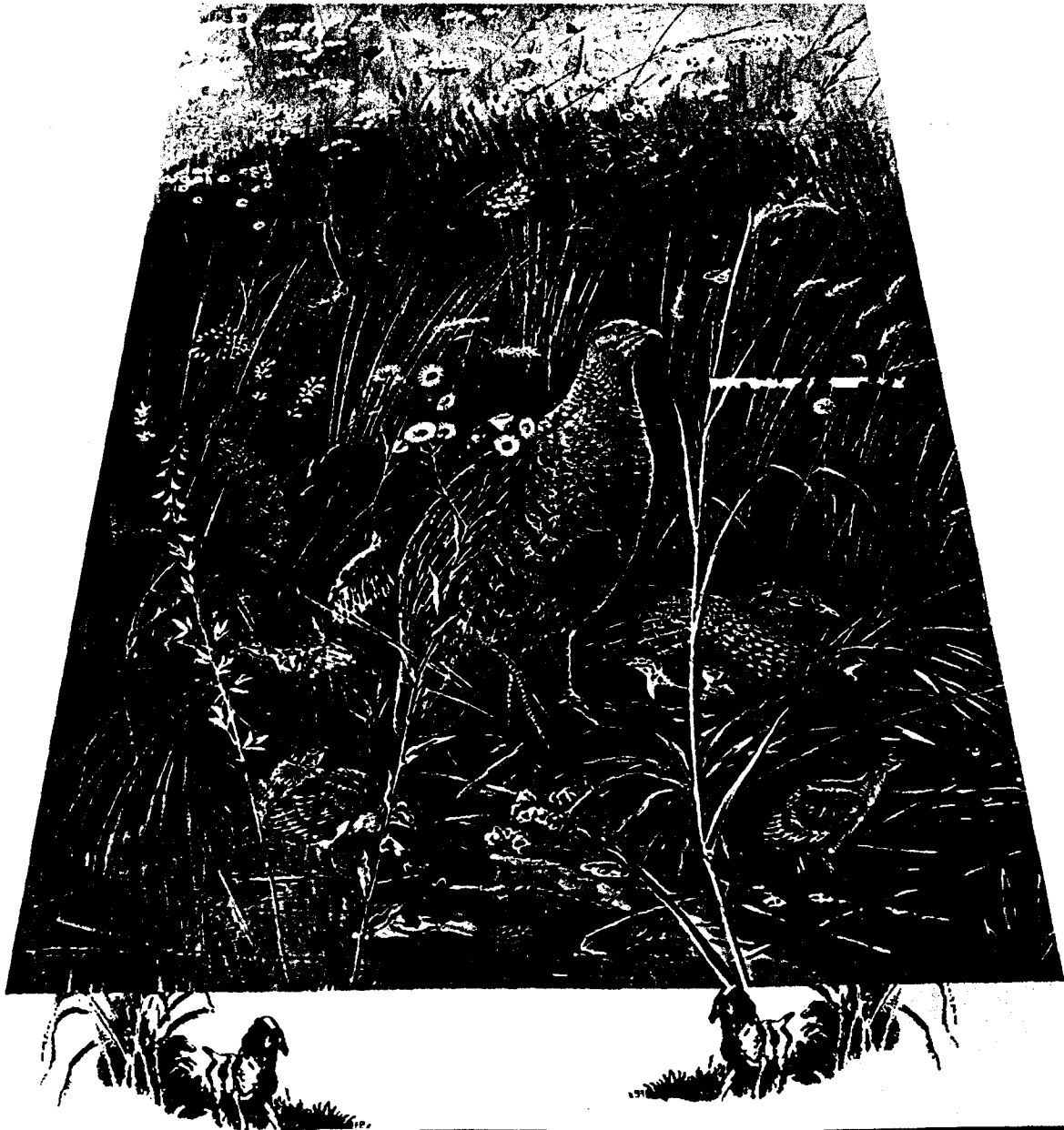
ABSTRACTS

OCTOBER 2003

MANAGING PARTRIDGES

AND OTHER GAME

IN THE AGRICULTURAL LANDSCAPE





FEAR, BEHAVIOUR AND PERFORMANCE OF DIFFERENTLY REARED GREY PARTRIDGES

Bagliacca M.

Dipartimento Produzioni Animali - Facoltà Medicina Veterinaria - Università di Pisa

In the present paper we wanted to resume the results obtained in several studies we carried out on the behavior and productive traits of differently reared partridges since the rearing technology can greatly modify, not only the performance, but also the behavior of the reared birds:

- partridges were couple bred in cages (1 male + 1 female) or colony bred in ground pens (3 males and 7 females); the reproductive performance of 73 couples and 10 colonies were recorded and the behavior of 3 pens and 4 cages were monitored (video tape technique) during the laying period.
- young partridges were differently produced for three years: - artificially reared chicks (partridge couples, bred in cages, the egg produced hatched in incubators and the chicks artificially brooded); - laid-brooded then reared by parents chicks (partridge couples bred in ground pens that directly reared their chicks); - forcedly adopted by broody hens chicks (partridge couples, bred in cages, the egg produced hatched in incubators and the chicks forcedly adopted by hens, forced in broody). In different years, when the chicks were about 60 and 120 days old, their reactions to the flight of a falcon or the passage of a fox were video recorded in three different aviaries built for this purpose. At the same ages of the previous experiments all the birds of three pens from each production thesis were tested for different behavioral tests (tonic immobility, novel object, metronome, box plus experimenter and box-emergence tests).
- partridges, coming from two different lines of the same Mediterranean population of grey partridges: line "incubator" (the birds had been always hatched in incubator from the eggs laid by the cage-bred parents) and line "broody" (the birds had been hatched directly by their own mothers for six generations) were couple bred in cages (1 male + 1 female). The reproductive performance of 54 couples (27 pairs for each thesis) were recorded during the laying period.

Results showed that:

- the production of colony-bred birds was not reduced by the unnatural colony breeding and fertility of the first eggs was increased in relation to competition between males but the natural behavior of the partridges was completely changed.
- Three of the behavioral checked tests (tonic immobility, novel object and metronome) were able to differentiate the different rearing technologies.
- The chicks reared by parents showed the best reaction to the passage of the falcon followed by forcedly adopted chicks and, latest, the artificially reared chicks. Similar results were obtained with the passage of the fox, even if the difference between the percentage of flying birds, at fox passage, did not differed between all thesis.
- the effect of the permanence time in the rearing pens (about 60 days old birds or about 120 days old birds) worsened either the behavioral tests (fear indicators) or the antipredator responses (to fox or falcon).
- grey partridges, divergently selected by the simple use of different breeding technologies (after only six generations of natural brooding instead of the most widespread technology with the chicks hatched in incubator from the eggs laid by the cage-bred parents) showed shorter and more delayed laying periods and consequently lower egg production then the chicks hatched in the incubators, when again bred in cages.