



WESTERN CAPERCAILLIE BREEDING

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CLASSIFICATION

Class: Birds

Order: Galliformes

Family: Phasianidae

Genus: Tetrao

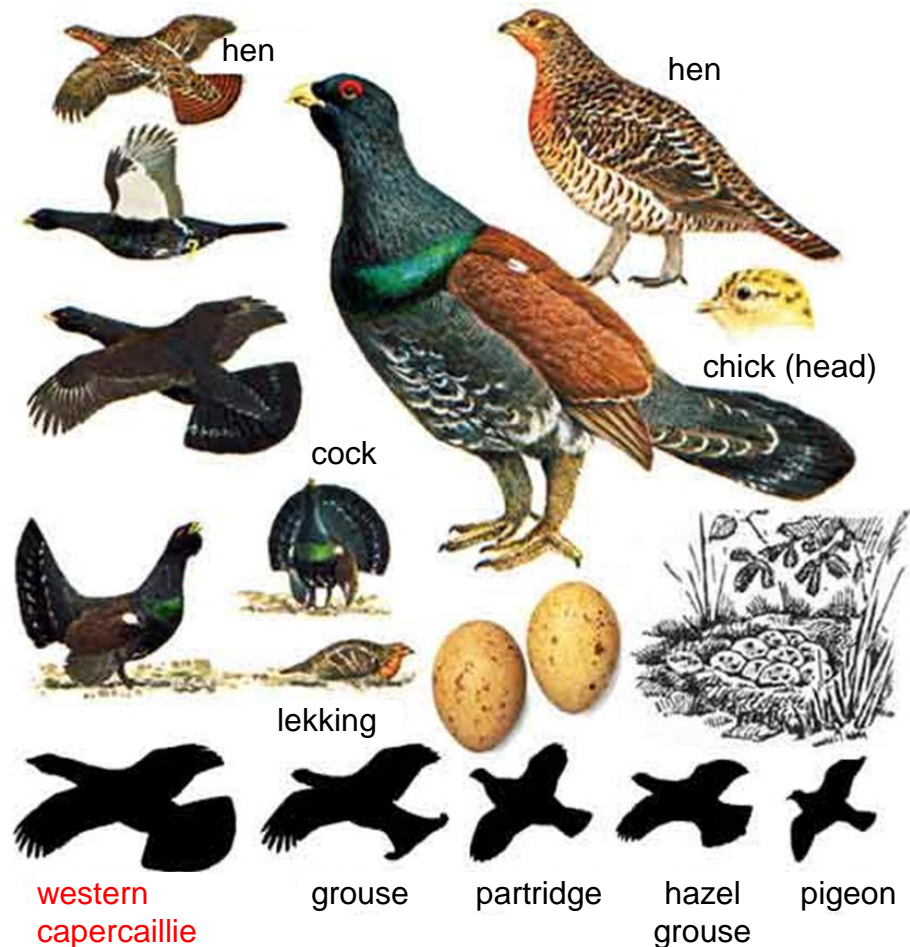
Species: Western capercaillie

16 subspecies

- *T. u. aquitanicus* (Ingram, 1915)
- *T. u. cantabricus* (Castroviejo, 1967)
- *T. u. grisescens* (Kirikov, 1932)
- *T. u. hiomanus* (Loudon, 1951)
- *T. u. karelicus* (Lönningberg, 1924)
- *T. u. kureikensis* (Buturlin, 1927)
- *T. u. lonnbergi* (Snigirevski, 1957)
- *T. u. lugens* (Lönningberg, 1905)
- *T. u. major* (Brehm, 1831)
- *T. u. obsoletus* (Snigirewski, 1937)
- *T. u. pleskei* (Stegmann, 1926)
- *T. u. rudolfi* (Dombrowski, 1912)
- *T. u. taczanowskii* (Stejneger, 1885)
- *T. u. uralensis* (Menzbier, 1887): white-bellied grouse
- *T. u. urogallus* (Linnaeus, 1758)
- *T. u. volgensis* (Buturlin, 1907)



Tetrao urogallus



- In Russia, there are two species of western capercaillie: Tetrao urogallus and Tetrao urogalloides.
- Body length: 60–87 cm
- Wingspan: 87–125 cm
- Weight: 3,500–5,000 g (cocks); 1,500–2,500 g (hens)



Wingspan in different subspecies

Wing and tail length (mm) in different subspecies of western capercaillie

No.	Subspecies	Wing length	Tail length	Tail length to wing length, %
1	<i>T. u. uralensis</i> (Nazarov, 1887)	400.0	307.0	76.7
2	<i>T. u. taczanowskii</i> (Stejneger, 1885)	408.0	320.0	78.4
3	<i>T. u. obsoletus</i> (Snigirewski, 1937)	406.0 (362–423)*	320.0 (291–340)	78.8
4	<i>T. u. karelicus</i> (Lönnerberg, 1924)	405.0 (397–412)	314.0 (300–325)	77.5
5	<i>T. u. lonnbergi</i> (Snigirewski, 1957)	384.0 (380–391)	300.0 (290–311)	78.2
6	<i>T. u. urogallus</i> (Linnaeus, 1758)	398.0 (389–409)	314.0 (298–330)	78.8
7	<i>T. u. pleskei</i> (Stegmann, 1926)	404.0 (387–415)	322.0 (300–340)	79.7
7/9	<i>T. u. pleskei</i> × <i>T. u. major</i>	404.0 (392–418)	322.0 (295–345)	79.7
8	<i>T. u. volgensis</i> (Buturlin, 1907)	399.0 (389–411)	319.4 (305–335)	80.0
9	<i>T. u. major</i> (Brehm, 1831)	408.3 (380–430)	337.9 (250–380)	82.7
10	<i>T. u. aquitanicus</i> (Ingram, 1915)	367.9	307.7	83.6
11	<i>T. u. cantabricus</i> (Castroviejo, 1967)	368.2	292.2	79.3
12	<i>T. u. rudolfi</i> (Dombrowski, 1912)	366.1	288.0	78.6

Types of breast feather patterns

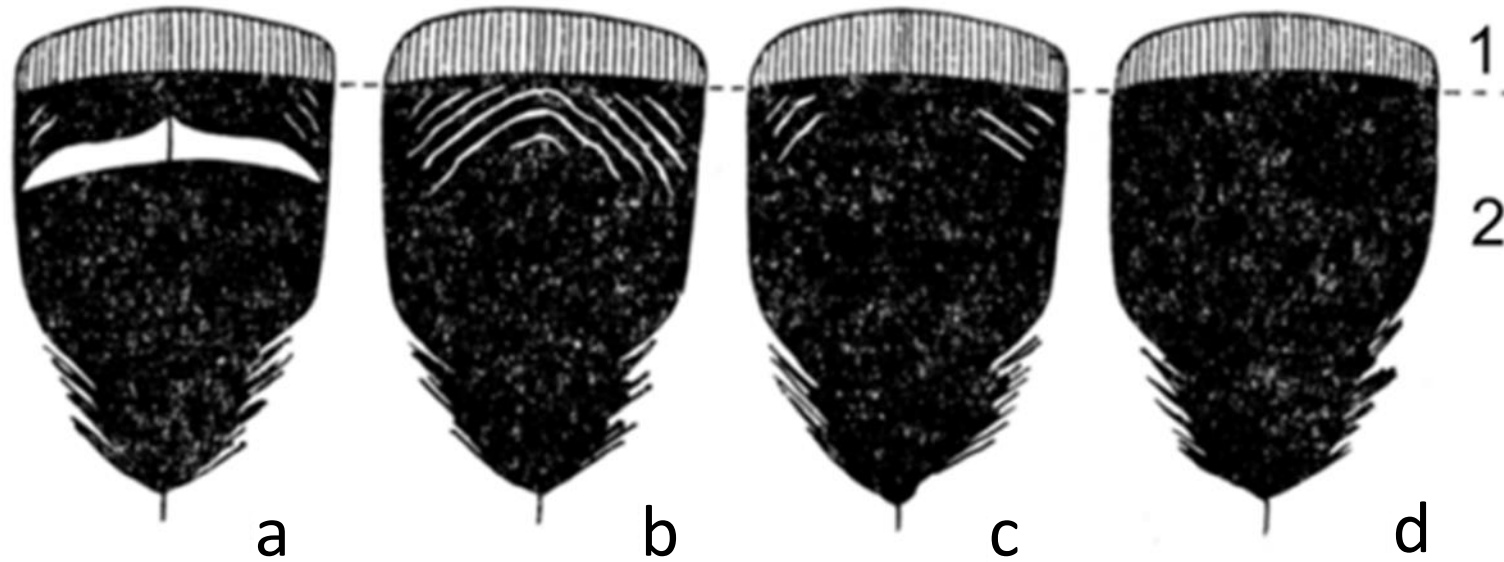


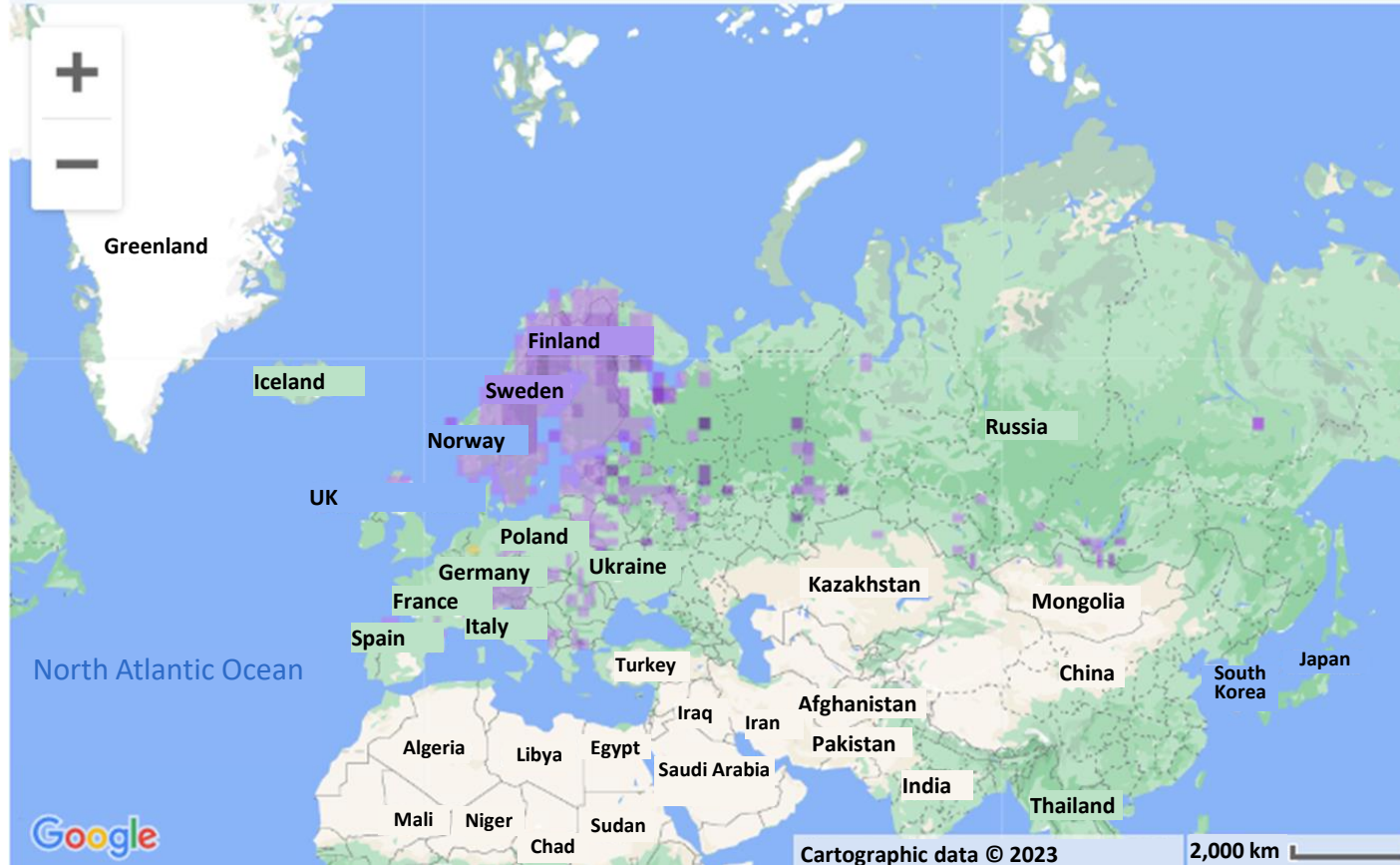
Figure 1. Types of breast feather pattern in *Tetrao urogallus* cocks.

1, exposed part of the feather: green stripe on the top; 2, part of the feather covered by overlapping feathers.

Habitat



Habitat map



Overwintering

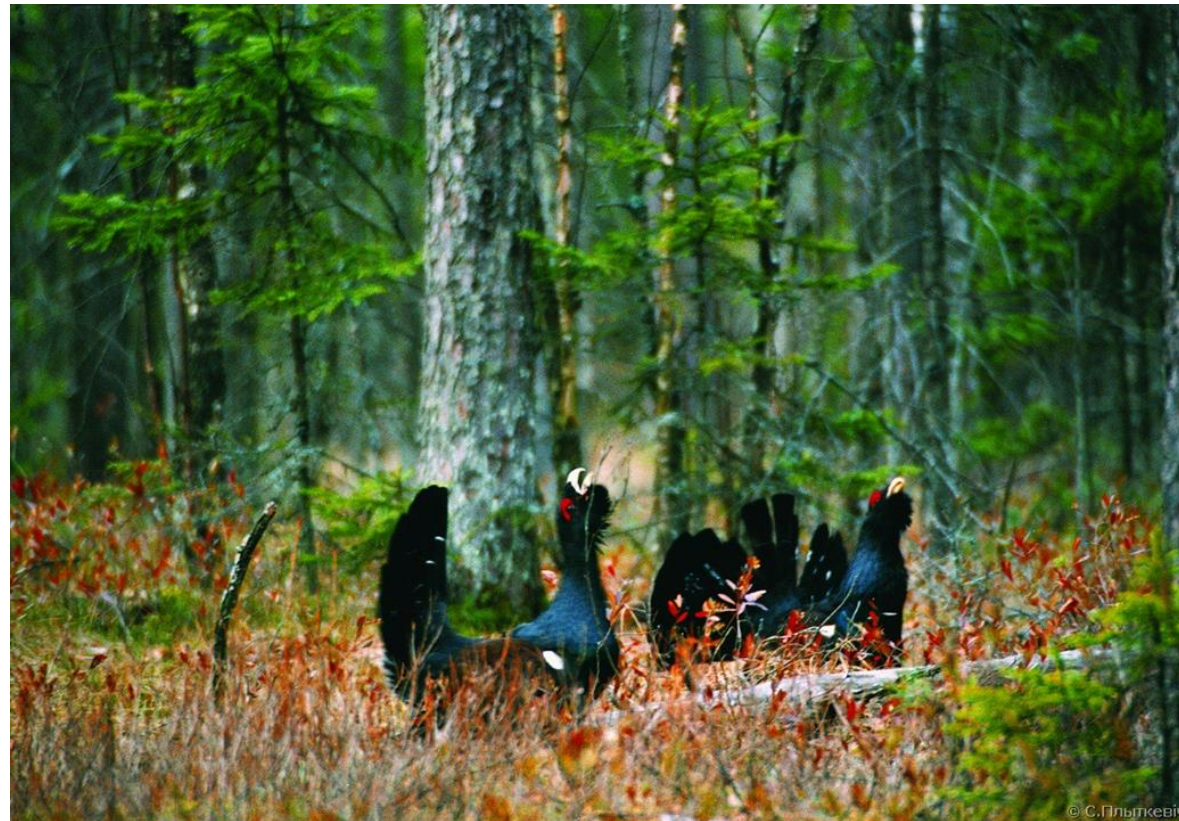


- Coniferous forests; coniferous needles are the main diet.
- Cocks and hens live in different flocks.

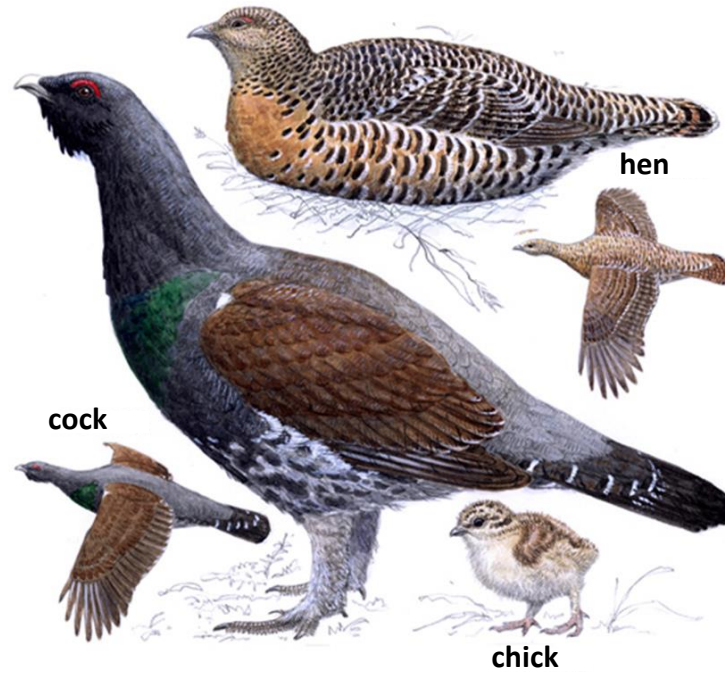


Lekking

A lek is an aggregation of male animals gathered to engage in competitive displays and courtship rituals, known as lekking.

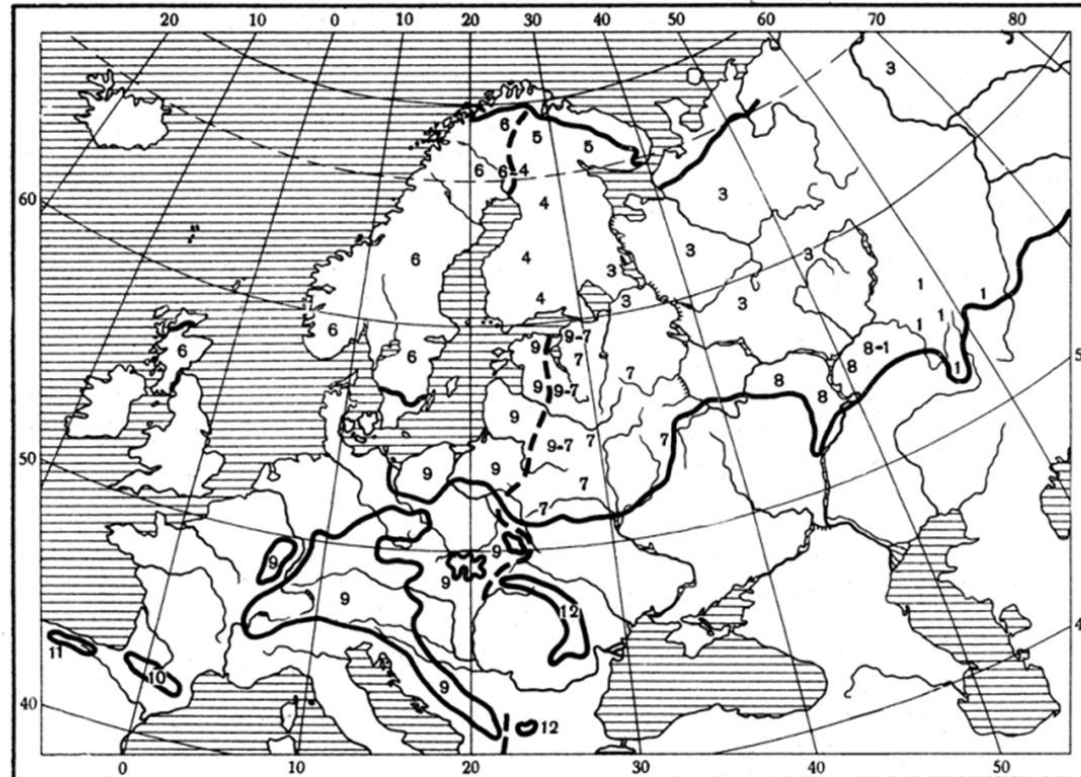


Mating call



https://vimeo.com/145405837?embedded=true&source=vimeo_logo&owner=2410238

Mating call



Current distribution of *Tetrao urogallus* subspecies in Europe.
The numbers denoting subspecies are the same as in the table; the dotted line represents the boundary between populations with "western" and "eastern" mating call types.

https://youtube.com/shorts/UsFo_fkWJ6w?feature=share

Why does western capercaillie go deaf?





Western capercaillie nest



- The average clutch size is 6–8 eggs; the eggs are yellowish-white with brown spots.
- The nest diameter is >250 mm.
- The nest is on the ground.

Western capercaillie extermination





Threats

- Habitat loss, fragmentation, and degradation
- Intensification of forest management practices
- Rejection of forest management practices
- Air pollution by nitrogen and heavy metals
- Overgrazing by cattle and/or deer in the forest
- Predation
- Overexploitation
- Collisions
- Climate change





Ways to increase population

- Appropriate forest management practices
- Preservation of intact shelters
- Control of cattle and deer grazing
- Fence removal
- Exploitation control
- Control of human intervention



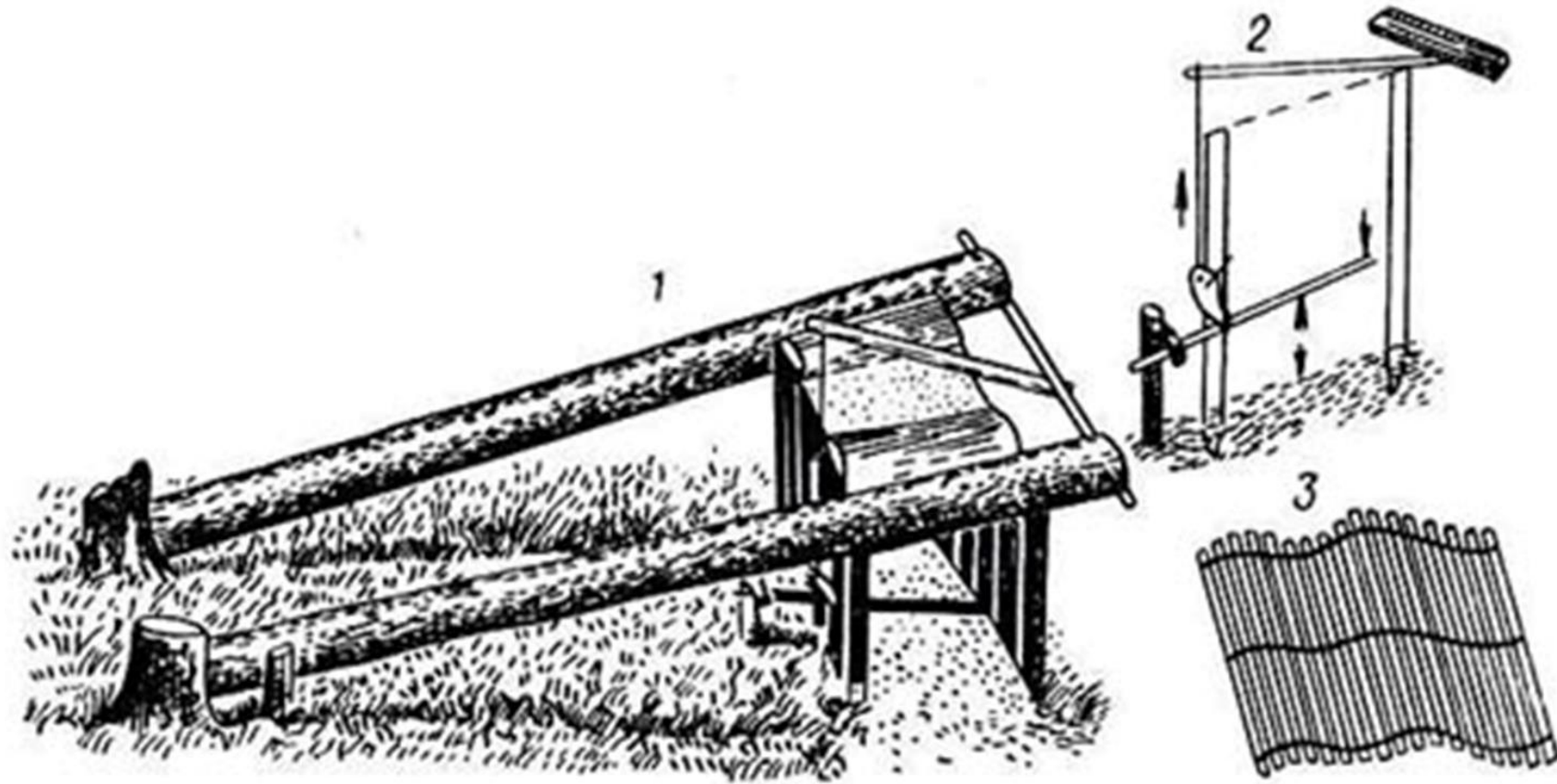
Diseases of western capercaillie

- Enterohepatitis
- Crop inflammation
- Ascariasis
- Bumblefoot
- Bird louse infestation

Western capercaillie breeding



Basic flock formation



A trap for western capercaillie and grouse: 1, general view; 2, tripping device; 3, mat



Keeping adult birds

Feed	Average daily feed consumption by periods, g			
	Rest XI–III	Preparation to breeding III–V	Breeding V–VIII	Fattening VIII–XI
Cranberries	100–180	110–210	130–230	130–220
Oat, wheat, and maize grain	120–210	120–180	120–220	120–210
Pine shoots	110–140	80–100	—	50–60
Soft cereals, clover, etc.	—	—	70–90	40–50
Willow flowers	—	40–40	—	—
Aspen leaves	—	—	60–70	60–70

Keeping adult birds





Hatching

- Leaving eggs laid by hens in the nests for natural hatching
- Hatching western capercaillie eggs by another bird species (chickens, turkeys, pigeons, etc.)
- Artificial incubation



Growth and development of chicks

Age of chicks, days	Weight, g				
	Minimal	Medium	Maximum	Medium	
				males	females
5	38.5	48.8	60.8	—	—
10	64.5	85.3	112.6	—	—
15	92.0	140.4	194.0	—	—
20	147	217.3	285	—	—
30	250	370.3	458	—	—
40	407	599.2	762	—	—
50	610	881.6	1,075	952	740
60	810	1,191.1	1,460	1,300	973
70	965	1,418.4	2,013	1,643	969
80	1,030	1,435.4	—	—	1,158
90	1,160	1,576.3	2,180	1,744	1,297
100	1,370	1,837.0	2,520	1,996	1,442

Daily weight gain of chicks

Age of chicks, days	1–5	5–10	10–15	15–20	20–30	30–40
Weight gain, %	5.4	11.2	10	8.6	5.2	4.7
Age of chicks, days	40–50	50–60	60–70	70–80	80–90	90–100
Weight gain, %	3.2	3	1.7	0.1	0.9	1.6

Relative weight gain of chicks

Age of chicks, days	1–5	5–10	10–15	15–20	20–30	30–40
Weight gain, g	2.3	7.5	11.0	15.4	15.3	22.9
Age of chicks, days	40–50	50–60	60–70	70–80	80–90	90–100
Weight gain, g	28.2	31.0	22.7	1.7	14.1	26.1



Raising chicks

Three basic ways to raise chicks:

- Keeping chicks with their mothers in sufficiently spacious aviaries with natural grass
- Keeping chicks with their brood hens or turkeys in similar aviaries
- Incubator rearing

Western capercaillie farms in Russia



In Novosibirsk and Samara



Western capercaillie breeding in Belarus



<https://youtu.be/B1kDKD31OGk>



Thank you!