

PHENOLOGY OF AUTUMN MIGRATION OF THE MALLARD IN UKRAINE

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Фенология осенней миграции кряквы в Украине. - В.Н. Грищенко. - Беркут. 6 (1-2). 1997. - Данные собраны при помощи фенологической анкеты, использованы также литературные сведения и личные наблюдения. Полученные материалы охватывают период в 25 лет (1970–1995 гг.). Фенодаты группировались по областям. По средним многолетним данным построены карты начала и окончания осеннего пролета. На них выделяются два широких фенологических русла пролета и две области запаздывания. Расположение их во многом сходно на обеих картах. Фенологические русла указывают на размещение основных пролетных путей. Направление миграции к концу пролета смещается больше к юго-западу. Это может быть связано с миграцией в разные сроки двух популяций.

Key words: Mallard, Ukraine, migration, phenology, map, flyway.

T.P. Shevareva (1968) according to ringing data has identified 9 geographical populations of the Mallard (*Anas platyrhynchos*) on the territory of the former USSR. In Ukraine breed ducks of the South population. For it is not characteristic considerable season movements. Through Ukraine pass also flyways of the Central population that breeds to the south from the Upper Volga. Its wintering area includes the Balkan Peninsula, northern part of the Azov-Black Sea basin, eastern coast of the Black Sea. A lot of mallards remain to wintering

on non-freezing waters on the whole territory of Ukraine. D.A. Scott and P.M. Rose (1996) recognized 5 population in Western Eurasia based on the main wintering regions. The territory of Ukraine is in limits of the west Mediterranean population and the Black Sea – east Mediterranean population.

Material and methods

The main material for this article was collected

Times of migration of the Mallard in Ukraine (1970–1995)

Сроки миграции кряквы в Украине (1970–1995)

Region Область	n	Start of migration Начало пролета				n	End of migration Конец пролета			
		M	SE	SD	lim		M	SE	SD	lim
1. Vinnitsa	37	4.10	3,1	19,1	1.09 – 17.11	54	7.11	2,3	16,9	5.10 – 6.12
2. Volynia	19	6.10	3,9	16,8	6.09 – 29.10	20	4.11	3,6	16,0	25.09 – 2.12
3. Dnipropetrovsk	25	5.10	3,2	16,0	5.09 – 14.11	26	28.10	4,0	20,6	17.09 – 30.11
4. Donetsk	20	28.09	3,9	17,4	3.09 – 2.11	15	7.11	5,1	19,7	5.10 – 3.12
5. Zhitomir	19	26.09	4,7	20,6	3.09 – 13.11	28	30.10	3,9	20,5	25.09 – 27.11
6. Transcarpathian	5	27.09	10,2	22,8	8.09 – 3.11	1	2.12	–	–	–
7. Zaporizhzhya	18	5.10	4,6	19,7	2.09 – 10.11	12	8.11	5,0	17,2	10.10 – 29.11
8. Ivano-Frankivsk	16	7.10	4,6	18,3	4.09 – 30.10	18	31.10	3,8	16,0	28.09 – 30.11
9. Kyiv	26	27.09	3,5	18,1	2.09 – 12.11	34	31.10	3,3	19,2	21.09 – 1.12
10. Kirovograd	32	4.10	3,6	20,5	6.09 – 18.11	32	31.10	4,1	23,3	21.09 – 9.12
11. Crimea	17	15.10	5,6	23,1	12.09 – 18.11	7	5.11	7,0	18,6	15.10 – 1.12
12. Lugansk	21	5.10	3,8	17,3	7.09 – 10.11	19	4.11	3,8	16,7	10.10 – 2.12
13. Lviv	29	3.10	3,8	20,3	2.09 – 15.11	37	30.10	2,7	16,7	27.09 – 29.11
14. Mykolayiv	12	4.10	6,8	23,5	3.09 – 22.11	15	28.10	5,2	20,2	1.10 – 29.11
15. Odesa	12	11.10	4,2	14,5	14.09 – 26.10	6	10.11	9,1	22,2	16.10 – 15.12
16. Poltava	26	30.09	3,0	15,3	4.09 – 28.10	29	2.11	4,1	22,1	23.09 – 6.12
17. Rivne	49	4.10	2,7	18,9	2.09 – 20.11	43	7.11	2,6	17,1	1.10 – 3.12
18. Sumy	35	1.10	2,6	15,5	5.09 – 15.11	50	31.10	2,4	16,7	18.09 – 6.12
19. Ternopil	20	3.10	3,8	17,2	2.09 – 6.11	36	24.10	3,0	18,1	22.09 – 29.11
20. Kharkiv	17	17.09	2,9	11,9	3.09 – 20.10	11	26.10	6,4	21,2	1.10 – 1.12
21. Kherson	8	6.10	7,7	21,9	9.09 – 5.11	12	6.11	7,0	24,3	29.09 – 1.12
22. Khmelnytsky	31	4.10	3,3	18,4	3.09 – 8.11	35	31.10	3,7	21,7	24.09 – 5.12
23. Cherkasy	32	13.10	3,5	19,6	6.09 – 11.11	37	9.11	2,2	13,2	14.10 – 30.11
24. Chernigiv	34	29.09	2,5	14,4	3.09 – 25.10	40	29.10	2,6	16,3	25.09 – 27.11
25. Chernivtsi	11	5.10	5,9	19,5	5.09 – 13.11	11	1.11	5,0	16,7	7.10 – 3.12
Total:	Bcero:	571		18,4		628		18,8		

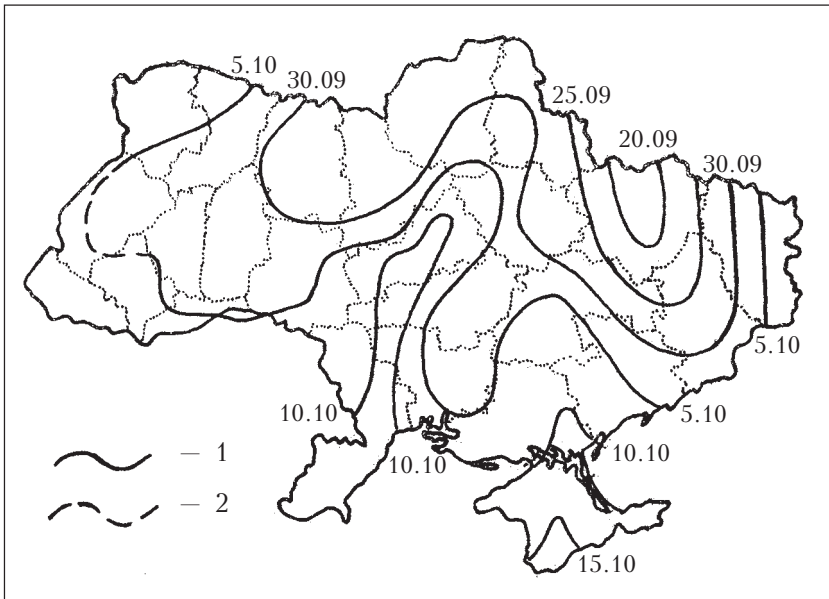


Fig. 1. Phenological map of the start of autumn passage of the Mallard in Ukraine (1970–1995).

Рис. 1. Фенологическая карта начала осеннего пролета кряквы в Украине (1970–1995).

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|------------------------|-------------------------|
| 1 — isophenes | изофены; |
| 2 — supposed isophenes | предполагаемые изофены. |

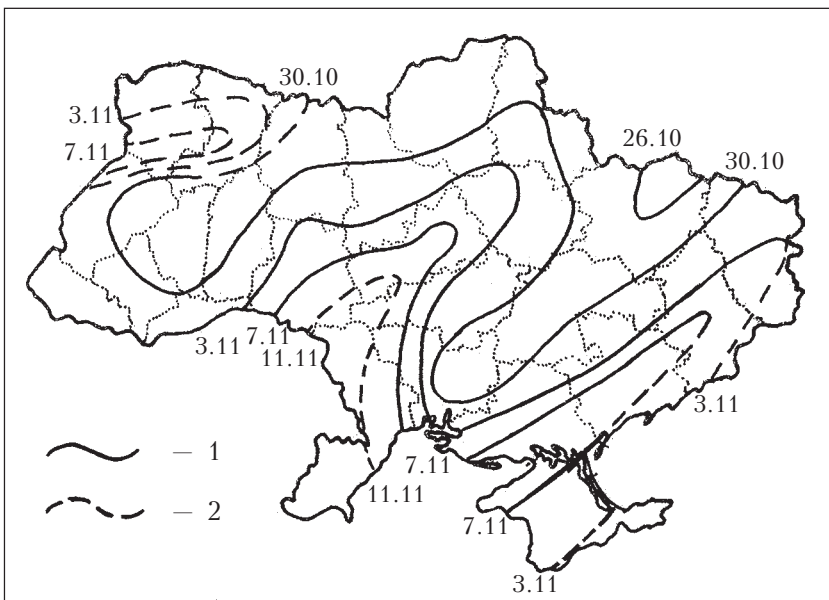


Fig. 2. Phenological map of the end of autumn passage of the Mallard in Ukraine (1970–1995).

Рис. 2. Фенологическая карта окончания осеннего пролета кряквы в Украине (1970–1995).

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|------------------------|-------------------------|
| 1 — isophenes | изофены; |
| 2 — supposed isophenes | предполагаемые изофены. |

with the help of special phenological questionnaire (Grishchenko, 1994a). The department of zoology of Kiev university have been sending it on the all territory of Ukraine since 1975. This work have been carrying out under the direction of Dr. V.V. Serebryakov. The literature data (Knysh, 1994; Krivitsky et al., 1996) and own observations were used too. Collected thereby dates cover the period in 25 years (1970–1995). They were grouped by regions. For them average dates of start and end of migration were calculated (Table). Phenological maps of migration were built on the ground of these data (Fig. 1, 2). We have used the territorial method of phenological mapping (Grishchenko, 1994b). Prominences of isophenes on maps show the direction of migration and some its peculiarities. With the help of phenological maps may be recognized main flyways of the species (Serebryakov, 1978).

To speak about exact times of start and end of migration of the Mallard is not possible. On one side, movements of males begin already at May and June. On other side, a lot of these ducks winter in all parts of Ukraine. Therefore, following the standpoint by Yu.A. Isakov (1952), we will understand by the autumn migration only the time of passage of the main part of population. Records of obviously wintering birds in December were not considered.

Results and discussion

First migrating flocks of mallards appear already in the first half of September, but in some places the start of passage can be delayed till November. Mean times of the start of migration are end of September — first half of October (Table). The

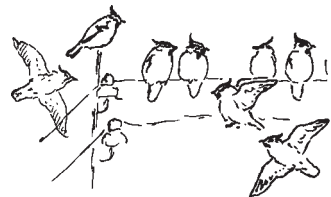
passage ends in different points during the period from end of September till end of November and beginning of December. Mean times of the end of migration are end of October – first half of November. Variation of migration times is identical at the start and the end of passage. Average standard deviation makes accordingly $18,4 \pm 0,6$ and $18,8 \pm 0,6$.

Migration starts and ends unevenly. On phenological maps we see areas with earlier and later times (Fig. 1, 2). They have called phenological streams (Grishchenko, 1994a, 1994b) and lagging areas (Serebryakov, 1979). Two broad phenological streams and two lagging areas are distinguished on maps of migration of the Mallard in Ukraine. Their disposition is alike on the both maps. Phenological streams show the location of main flyways. In Ukraine they are directed mainly to the south-south-west and the south-west. Till the end of passage the direction of migration displaces still more to the south-west. It may be connected with migration of two populations in different times.

The map of Mallard's populations in the book by D.A. Scott and P.M. Rose (1996) shows that directions of its flyways in Ukraine have to be in sector from the south to the south-west. The general direction of migration is the south-west. Our phenological maps are well coordinated with these conclusions.

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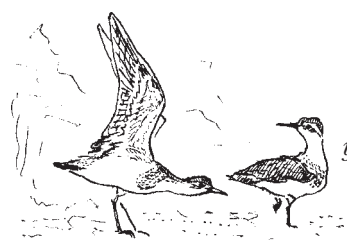
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ИНТЕРЕСНЫЙ СЛУЧАЙ
 КЛЕПТОПАРАЗИТИЗМА

An interesting case of the kleptoparasitism. - S.A. Loparev. - Berkut. 6 (1-2). 1997. - An incident between a White-tailed Eagle and a White Stork was watched on the Dnieper 12.07.1982. The stork was attacked by the eagle over the water and had to regurgitate the prey. The eagle picked up regurgitated little fishes.

12.07.1982 г. на Днепре в районе Каневского заповедника, между о-вом Шелестов и с. Пекари около 10⁰⁰ в солнечную безветреную погоду нами наблюдался следующий инцидент. Белый аист (*Ciconia ciconia*), возвращающийся к гнезду с кормом через основное русло Днепра на высоте 50–70 м над водой был атакован взрослым орланом-белохвостом (*Haliaeetus albicilla*), до этого кружившим на высоте 200–250 м. Нападение проводилось как на добычу – с полусложенными крыльями и выставленными лапами. Аист на лету оторвал добычу, отвернул в сторону и интенсивным машущим полетом ушел в направлении села. Пролетев мимо спасающегося аиста, орлан завис над поверхностью воды в “тре-

пещущем” полете на 2–3 секунды и, погрузив лапы почти до брюха, вытащил широкотелую рыбу (типа густеры) длиной 15–17 см. Поднявшись над поверхностью, орлан проглотил рыбу, переложив ее из лапы в клюв. После этого последовал второй заход на то же место и после чуть более длительного зависания и поиска была проглочена вторая, несколько более мелкая и узкая рыба. Третий заход и зависание более чем на 10 секунд с поисками лапами в воде результатов не дали. Остальная часть оторгнутой аистом добычи, по-видимому, состояла из мелких объектов. Орлан, поднявшись на 15–20 м, несколько раз сильно встряхнулся в полете и, перейдя на парение, начал набирать высоту.



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