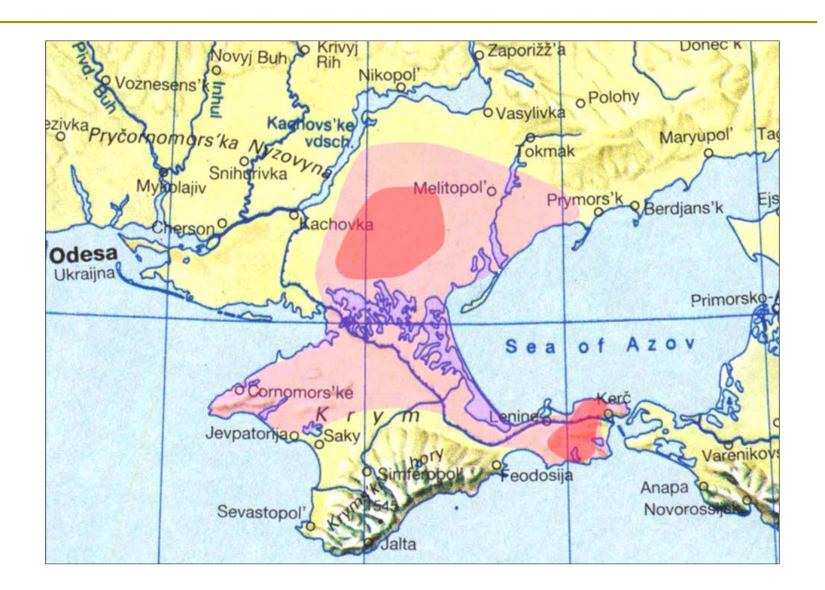
### Threats for wintering Great Bustard in southern Ukraine

#### Yuriy Andryushchenko

Schmalhausen Institute of Zoology, Ukraine

Scientific Symposium "Advances in the Research and Conservation of the Great Bustard in Europe" (Germany, 12-15.03.2018)

### Wintering area in Ukraine

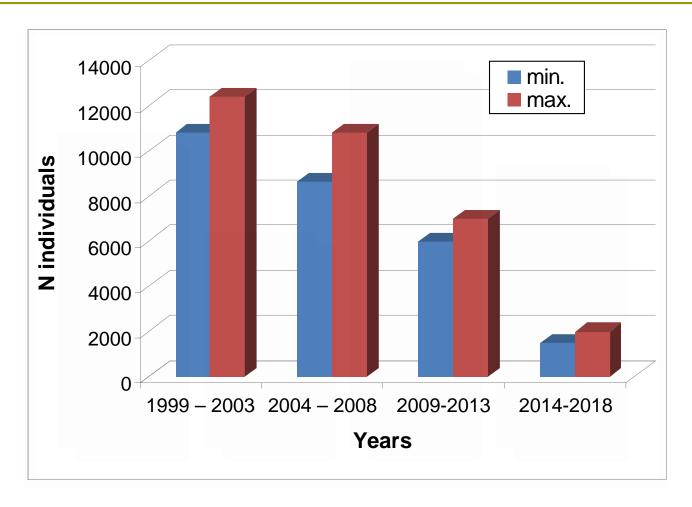


### Current conditions for wintering

Generally, in 2014-2018, the wintering conditions for bustards in Ukraine have improved:

- winters became warmer with less snow;
- forage became more available (increased growing of rape, soya, winter wheat, sunflower)
- less disturbance from local people (reduction in rural population, lesser movements outside settlements, private landowners protect their lands).

# Rapid decline in the number of wintering GB:



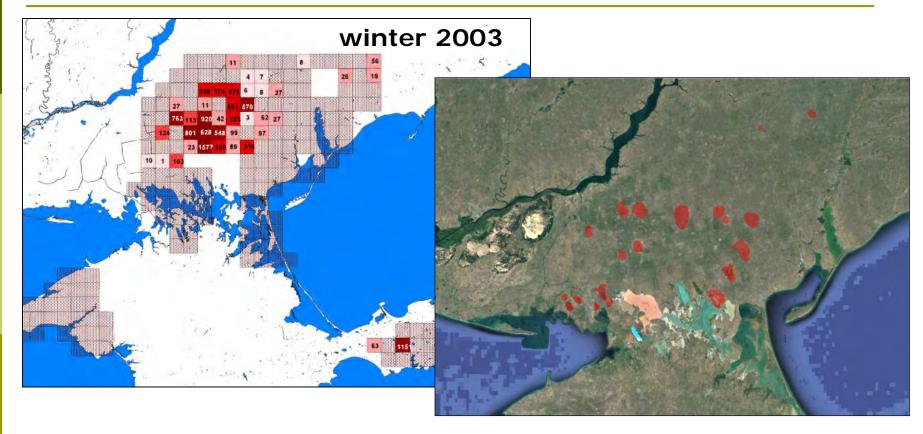
The trend of the GB numbers in the 21st century

## Distribution of wintering GB in southern Ukraine:

| Regions                         | N individuals |           |           |               |
|---------------------------------|---------------|-----------|-----------|---------------|
|                                 | 1999–2003     | 2004–2008 | 2009-2013 | 2014-2018     |
| Kherson &<br>Zaporizhya regions | 9000 - 10000  | 7000-8500 | 4700-5000 | 500-600       |
| Syvash region                   | 300 - 400     | 50-100    | 50-100    | 0-50          |
| Western & central<br>Crimea     | 200 - 300     | 200-400   | 200-400   | ? (100-200)   |
| Kerch peninsula                 | 1200 - 1500   | 950-1200  | 900-1200  | ? (800-1000)  |
| Other areas                     | 100 - 200     | 450-600   | 150-300   | ? (100-150)   |
| Total                           | 10800 - 12400 | 7000-8500 | 6000-7000 | ? (1500-2000) |

? - in the Crimea supposedly

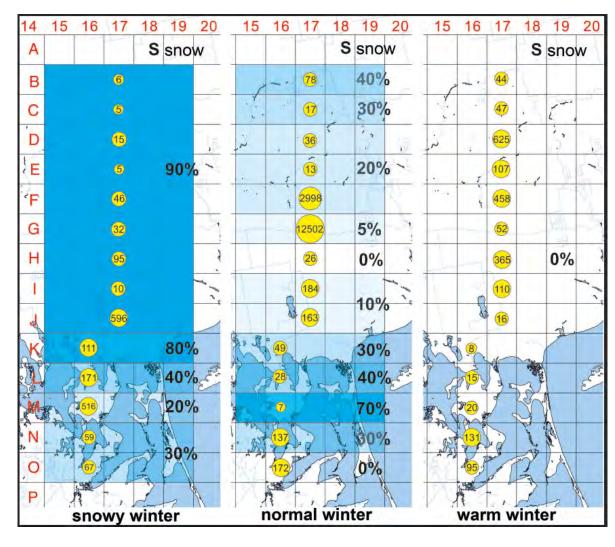
# Natural threats Drying up bottoms of large depressions



drying up bottoms of large depressions (inaccessible to disturbance and poachers), caused by the long-term decrease of the groundwater level (distribution of bustards in the winter of 2003 and large depressions about 5x10 km in size, the largest – 9x14 km)

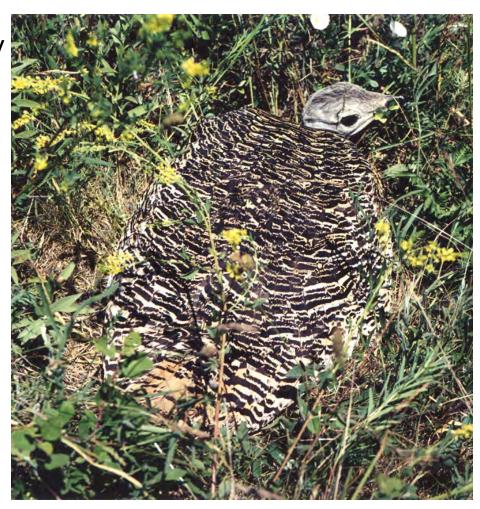
#### Continuous snow cover

- more prolonged periods with a virtually continuous snow cover making the forage inaccessible (the most cold and snowy winters were in 2006 and 2010)
- shift of the snowy season to February-March



### Reduction nesting populations

 reduction in the number of nesting birds approximately by 70% in Saratov Region of Russia (information of M.Oparin)



# Anthropogenic threats Disinfestation of agricultural fields



Red-breasted Goose and other geese species died from zinc phosphide (photo by A.Mezinov)

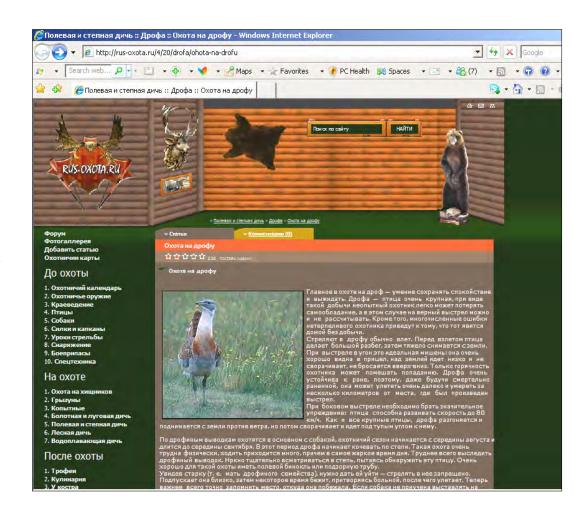
#### Increasing disturbance of birds

- winter grazing of cattle,
- cultivation of agricultural fields,
- hunting,
- also hunters searching for gamebirds in the fields where the GB are feeding



### Poaching

- in the 2010s, the winter hunting for bustards boomed in the south of Kherson and Zaporizhzhia regions, and on Kerch peninsula as well (it was often advertised on the Internet)
- absence of protected roosting places



#### Militarization of the Crimea

Since 2014, GB have disturbance on great number of military vehicles and soldiers in the Crimea and the south of Kherson Region



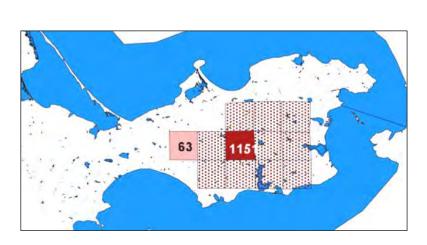
## Construction of a gas pipeline in 2015-2016

- GB have disturbance in the course of constructing a gas pipeline from Kerch to Feodosia;
- also degradation of habitats (a stripe about 100x100 km):
- ornithological expertise was absent!?



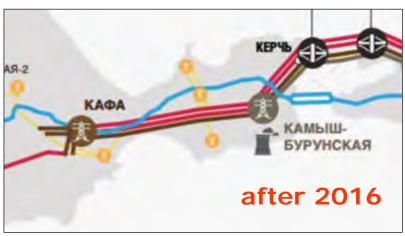
## Construction of power lines in 2015-2016

- GB have disturbance during constructing new power lines from Kerch to Feodosia
- ornithological expertise was absent!?



Distribution of GB in 2003





#### Collision with power lines

- prior to 2015, a lot of birds death from the only one power line
- in 2015- 2016 two more power lines were added



# The idea of absolute protection of steppes

- in protected areas the management of steppe ecosystems is prohibited (only observations are allowed)
- that is why necessary conditions for steppe birds are absent (sparse short grass cover, accessible water places)



#### Absence of control since 2014

Since 2014, it's not possible to carry out research, monitoring and protection of birds in the occupied Crimea.

## Recommendations for Protecting GB in Ukraine

- To designate areas for the protection of wintering bustards.
- To restore in protected steppe areas the conditions necessary for breeding and wintering of steppe bird species: sparse and short grass cover (grazing or mowing), accessible watering places (water bodies without reeds along the banks), absence of tree-shrub thickets (prevention of overgrowing the steppes with them)
- □ To study risks from power lines in wintering areas, especially along the gas pipeline and power lines on Kerch peninsula.
- To implement measures to prevent poaching.
- □ To implement international control of the breeding and wintering population GB in the Crimea (first of all, on Kerch peninsula)
- To provide permanent monitoring of the bustard wintering and study of their breeding areas to find out current numbers, distribution and negative factors, including the use of satellite imagery.