Influenza surveillance in wild birds in Africa: preliminary results from ongoing FAO studies

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Little information is available about the prevalence of avian influenza viruses (AIV) in wild birds in Africa, in particular in sub-Saharan areas. In the context of the spread of HPAI H5N1 virus through Eurasia during 2005, a surveillance study was launched in Africa in early 2006, within the framework of regional Technical Cooperation Programmes (TCP) of FAO.

From mid-January to mid-March, field campaigns were conducted in 12 countries of northern, western, eastern and southern Africa, including recently infected countries (Burkina Faso, Egypt, Niger and Sudan). In total 4893 samples were collected from wild birds, in large wetland areas where Palearctic migratory, inter-African migratory and African resident waterbirds congregate.

The majority of these samples were collected from African ducks (30%, mostly white-faced whistling duck Dendrocygna viduata) and Palearctic ducks (29%, mostly garganey Anas querquedula), while other samples originated mostly from Laridae (11%), shorebirds (10%) and Rallidae (9%).

Samples were screened by RRT-PCR, and virus isolation was attempted for all type A positive samples. Preliminary results indicate an overall prevalence of AIV of 3%, and no positivity for H5N1 HPAI. AIV were detected in both Palearctic and African bird species, indicating that viruses have been circulating in Africa during the northern winter, including in the sub-Saharan region, in both migratory and resident sectors of the waterbird community.

The detection of viruses in ruff Philomachus pugnax (2%, n= 105) contrast with the apparent absence of AIV reported in previous studies of shorebirds in Europe. Various subtypes of virus have been isolated in garganey, indicating that different AIV are circulating at the same time in a single wintering population, in agreement with patterns observed in Europe and North America.

Our findings reveal that LPAI virus can persist in wild birds in sub-tropical environments, and support the hypothesis that AIV could be perpetuated in wild birds throughout the year, including in Palearctic waterbirds wintering in sub-Saharan Africa before their northwards spring migration. During 2006 and 2007, the surveillance coverage is being extended to other TCP regions, including the Middle East and Eastern Europe, where some campaigns were in progress during spring 2006.

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