

The impact of fish and drought on frog breeding in temporary waters in Zimbabwe

T. Muteveri & B. E. Marshall

Abstract

The breeding of frogs in four ponds near Harare, Zimbabwe, was investigated during a wet rainy season (2000/01) and a dry one (2001/02). During 2000/01 eight and nine species bred in two ponds in abandoned gravel pits that never contained fish, but only four species bred in these in 2001/02 and the relative abundance was reduced by about 50%. Pond 3 was a small dam that filled after the rains and was invaded by fish once it overflowed. Five species bred in it in 2000/01, but breeding activity was curtailed once it was invaded by catfish, *Clarias gariepinus*, some of which were found with frog remains in their stomachs. The pond did not overflow in the following season, and was therefore not invaded by fish; although only four species bred in it their relative abundance was considerably higher. Pond 4 was a permanent pond that always contained fish. Only three species bred in it and the relative abundance of tadpoles was always low. Species belonging to the Ranidae seemed to be most severely affected by drought and this may explain the absence of some species, such as the African bullfrog, *Pyxicephalus adspersus*, that was once abundant around Harare.