

Are floods prompting increased predation of Daubenton's Bat by Barn Owls ?

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Worst winter rains in two and half centuries Above and below Blackwater Bridge in flood Feb 2014-



BELOW



ABOVE

Natural Catastrophes

- + Allow opportunistic predators opportunities
- + Clumping a foraging Daubenton's Bats (from now on Water Bats) may allow Barn Owls to do this during floods- in small water bodies- up stream Rivers in Cork.
- + This is un-expected, reviews suggest otherwise
Roulin & Christie (2013) found in 4 million Barn owl prey, 4949 bats (1.64%) of which 107 were Water Bats- 0.000045 % - very rare



Barn Owls and Water Bats

- Barn Owls; declining. Used to rely on rodents, especially rats, which have rapidly declined, a major change in the wild mammal fauna of small water bodies .
- Water Bats; forage at surface need smooth surfaces, they are of interest as indicators of clean fresh water and as carriers of EBL II (Racey & Fooks 2005, Jones *et al.*, 2009, Abbott *et al.*, 2009, Atterby *et al.*, 2010).
- In floods what happens ? Are bats are forced to clump at parts of river where sort of smooth surfaces occur, e.g. above bridges.

Upper reaches of Cork Rivers, small water bodies, after storms

- (A) On 31 August 2008 eighteen fresh Barn Owl pellets produced remains of two Water bats, and 42 other prey (Sleeman & Kelleher, 2008)
- (B) On 1 July 2010 fifteen fresh Barn Owl pellets produced remains of one Water bat and 57 other prey (Ronayne, Sleeman & Carden, 2011)
- Water Bat & Barn Owl Survey

References

- ABBOT, I, SLEEMAN, D.P. & HARRISON, S., (2009) Bat activity affected by sewage effluent in Irish rivers. *Biological Conservation* 142: 2904-2914
- ATTERBY, H., AEGETER, J.N., SMITH, G.C., CONYERS, C.M., ALLNUTT, T.R., RUEDI, M., & MAC NICOLL, A.D., (2010) Population genetic structure of the Daubenton's bat (*Myotis daubentonii*) in western Europe and associated occurrence of rabies. *European Journal of Wildlife Research* 56: 67-81
- JONES, G., JACOBS, T.H., KUNZ, T, WILLIG, M.R., & RACEY, P.A., (2009) *Carpe noctum*: the importance of bats as bioindicators. *Endangered Species Research* 8:93-115
- LENDELL COCKRUM, E., (1997) *Rabies, Lyme Disease, Hanta Virus and other-animal bourn human diseases in the United States and Canada- what every Parent, Householder, Camper, Hiker, Teacher, Wildlife Rehabilitator, Hunter and Fisherman needs to know.* Fisher Books, Tucson, Arizona
- RACEY, P., & FOOKS, A., (2005) Rabies in bats in Britain. *Biologist* 52: 24-38
- RONAYNE, S.T., SLEEMAN, D.P., & CARDEN, R., (2013) Another record of Daubenton's bat (*Myotis daubentonii*) in Barn owl (*Tyto alba*) pellet following flooding. *Irish Birds*
- ROULIN, A & CHRISTE, P., (2013) Geographic and temporal variation in the consumption of bats by European Barn owls. *Bird Study* 60: 561-569.
- SLEEMAN, D.P., (2013) Fly fishing accidents and bats. *Irish Naturalists' Journal* 32: 138-141
- SLEEMAN, D.P., & KELLEHER, K.M., (2008) Barn owl *Tyto alba* depredating Daubenton's Bats *Myotis daubentonii*. *Irish Birds* 8: 434-435.
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