

# Night flyers

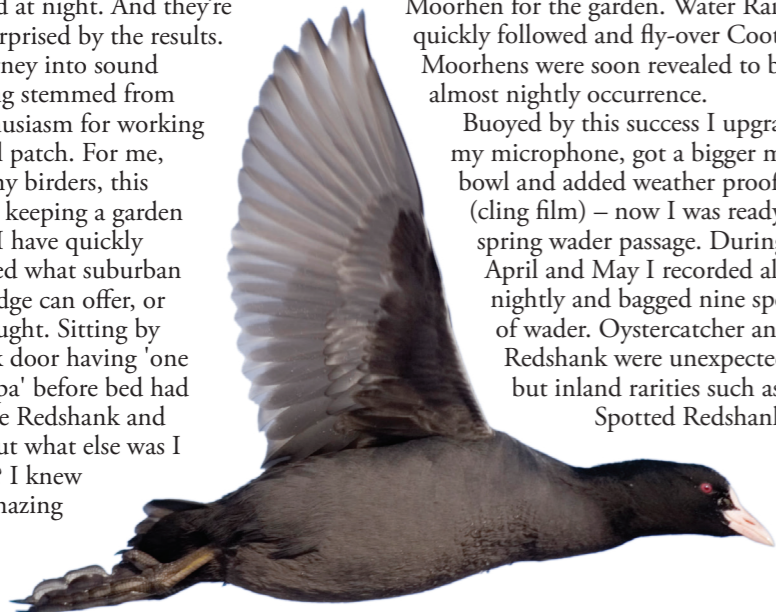
## Bioacoustic monitoring

There is a wealth of bird life flying over our gardens at night that most of us are unaware of. **Simon Gillings** tells us about what he's learnt through night-time sound recording.

*A hunched figure sits by a computer, listening to the hiss and crackle of the universe. On screen, the steadily scrolling snowstorm is interrupted by a series of bright blips, accelerating towards the end. Suddenly alert, the figure rewinds the recording to replay the contact. It's what they've been waiting for. Proof of life. Proof that a Little Grebe flew over their garden in the small hours of last night.*

### UNEXPLORED BIRDLIFE

It may not be as glamorous as the Search for Extra Terrestrial Intelligence, but a growing number of birders are setting up recording equipment to discover hitherto undetected birds passing overhead at night. And they're often surprised by the results. My journey into sound recording stemmed from my enthusiasm for working my local patch. For me, like many birders, this involves keeping a garden list but I have quickly exhausted what suburban Cambridge can offer, or so I thought. Sitting by the back door having 'one last cuppa' before bed had given me Redshank and Coot, but what else was I missing? I knew some amazing



species, such as Ortolan Bunting, had been detected flying over Portland Bill and Poole Harbour by leaving audio recorders running all night. But was it worth doing this in suburbia? After my colleague Nick Moran recorded impressive passages of Redwings, ducks and even a Bittern from suburban Thetford, I figured I should give it a try. In late March I tried a low-tech, low-cost approach. I suspended a £10 USB microphone over a plastic mixing bowl (to act as a reflector) in my garden, connected the mic to my computer and left it recording overnight. Reassuringly, I got several Redwings that first night and subsequently a long overdue first Moorhen for the garden. Water Rail quickly followed and fly-over Coots and Moorhens were soon revealed to be an almost nightly occurrence.

Buoyed by this success I upgraded my microphone, got a bigger mixing bowl and added weather proofing (cling film) – now I was ready for spring wader passage. During April and May I recorded almost nightly and bagged nine species of wader. Oystercatcher and Redshank were unexpected, but inland rarities such as Spotted Redshank

and Grey Plover were a real bonus. Add in a few Wigeon, Little Grebe, and a Reed Warbler singing from a neighbour's garden at midnight and it was definitely worth it. The website *Xeno-Canto* became my friend, its vast catalogue of sound

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recordings, including many of night migrants, helped confirm some of the less familiar sounds. Each morning I would await the regular email exchange with Nick: *What did you get last night? Is this recording just a weird Water Rail?*

### WHAT TO LISTEN OUT FOR

As I write it's late summer and waders are already returning (I recorded Redshank and Oystercatcher in early July). BirdTrack indicates July to September are the peak months for Green Sandpiper in Cambridgeshire, so that and Whimbrel are my next targets. What the rest of the autumn will bring is anyone's guess – I certainly wouldn't have predicted many of the species I recorded in spring. Why not find out what birds are flying undetected over your garden?

### GIVE IT A GO

If you already have a computer, for as little as £10–£25 you can purchase a USB microphone and, optionally, an extension cable. If you want higher quality recordings, the ability to record remotely or a microphone that you can easily take with you into the field, go for one of the hand-held recorders and shotgun microphones (good advice at [www.wildlife-sound.org](http://www.wildlife-sound.org)). If you're using a computer you'll need one of the freely available programs such as Audacity ([www.audacityteam.org](http://www.audacityteam.org)) or Cornell's Raven Lite ([www.birds.cornell.edu/raven](http://www.birds.cornell.edu/raven)) to save the incoming audio.

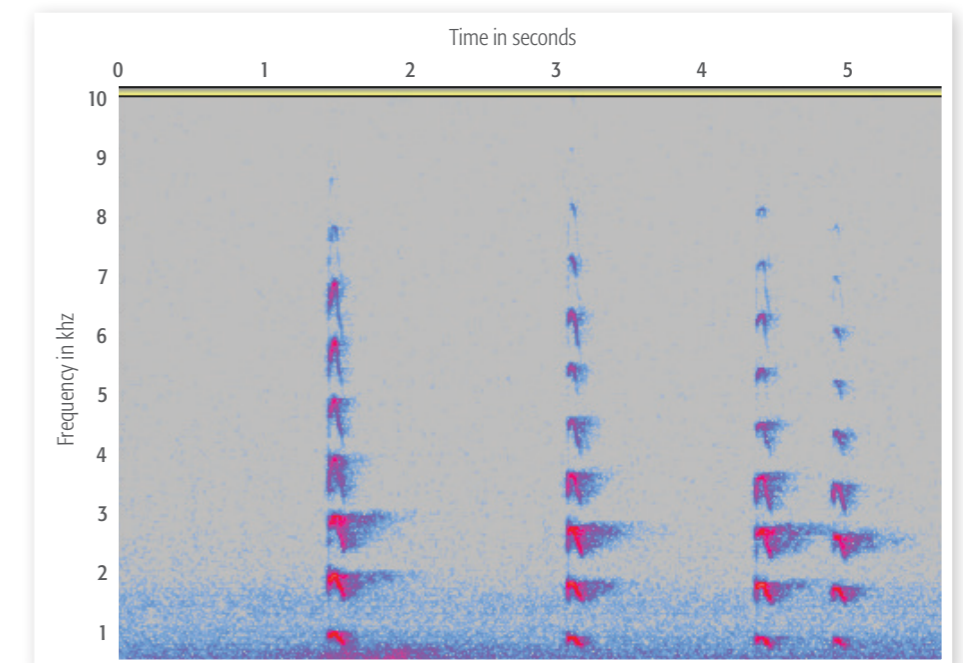
### SCANNING THE RECORDING

Even in midsummer you'll get five hours of usable recording between dusk and the dawn chorus, which is too long to listen to in real time. Enter the sonogram: a simple visualisation of the soundscape through time. Open the sound recording in Audacity and it displays the sonogram, which can be visually scanned relatively quickly. You'll soon get to know what the sounds of car horns, the neighbour's cat and the resident nocturnal wildlife look like so you only have to *listen* to the migrant birds.

### IDENTIFICATION

Xeno-Canto ([www.xeno-canto.org](http://www.xeno-canto.org)) is a must, with a large collection of recordings and associated sonograms. Search for species then filter on remarks or call types (e.g. "rmk: nocturnal",

"type: flight"). *The Sound Approach to Birding* book offers a very accessible introduction to understanding sonograms and the different components of bird calls, and their website offers more tips ([www.soundapproach.co.uk](http://www.soundapproach.co.uk)). BTO is working with other scientists to develop algorithms for automated identification of birds (as we already do for bats, see [www.batsurvey.org](http://www.batsurvey.org)) but this is still some way off and for many people the visual identification is part of the journey of discovery.



What birds are flying undetected over your house at night?

Sonogram showing a 5-second recording of four 'kewk' calls of a flyover Coot (Cambridge, 2300hrs, 30/04/2017). Listen to it here: [www.xeno-canto.org/381213](http://www.xeno-canto.org/381213).