

'Noc-Mig' - Nocturnal Migration over Dorset and Beyond

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It's always exciting when a new aspect of birding evolves that not only provides new discoveries but new opportunities for birders to delve even deeper down the birdy rabbit hole. Before I continue, I have to state that the following article was a joint effort. They may be my words, but the learning journey was definitely a team effort and I'd like to thank my mentors from the start Mark Constantine, Magnus Robb and Nick Hopper whom I have shared and learnt so much with over the last six years regarding this subject.

Noc-Mig is the abbreviated term for 'nocturnal migration', just as vis-mig is the abbreviation of 'visible migration', perhaps a term that birders are more familiar with. Birders have been standing on cliff tops for many years logging and counting the finches, larks, wagtails and pipits that pass over at dawn on a cold October morning, and their totals are incredible. However, during these visible migration sessions many species are notably absent despite us knowing full well they're migrating at certain times of year. So why aren't we seeing them? Because they migrate in the dark.

So where did this all start for me? Initially this fascination subliminally began in the late 1980's when I distinctly remember hearing Redwings calling one bonfire night at the St Peters Finger pub in Lytchett Minster. You know, when bonfires were allowed to be huge and largely unsafe. Those Redwing calls and the memory stuck with me forever and to this day is still one of my top three favourite bird sounds (Redstart and Nightjar song being the other two).

Roll on 22 years, having just set up Birds of Poole Harbour with Mark and Mo (Constantine) in 2013, I naturally developed a stronger interest in bird sounds as my work brought me into close contact with the Sound Approach team. Mark was just finishing writing 'Catching the Bug' with Nick Hopper and I had met Magnus and Nick a year or two previously, and so bird sounds were definitely a regular talking and focal point. I quickly acquired some sound recording equipment and got out recording as much as I could around the shores and heathlands of the harbour, only ever by day, or at dusk for Nightjars. I remember in August 2014 Magnus was staying at Mark and Mo's house in Poole just before the Birdfair, and Mark telling me that Magnus had sound recorded Pied Flycatcher and Wigeon over his house in Poole whilst staying there. These were excellent records for Mark's house and I couldn't figure out how they'd done it but seeing as it was the Sound Approach, I just accepted it and continued on my way! It wasn't until a few months later in early 2015 when I'd begun working with Magnus a bit more that I finally plucked up the courage to ask how they'd managed to sound record the Pied Flycatcher and Wigeon at Mark's house the previous August. Magnus very casually went on to explain that he'd simply 'chucked out' his recorder at night and left it running for several hours and then analysed the recordings the following day using Raven Pro. *'You should give it a go'* he said. This blew my mind as I'd never even considered recording the night sky to try and listen to migrants. I mean, did birds really call that much at night?

Roll back several decades and Mark C and Arnoud van den Berg, two of the founding members of the Sound Approach collective had been part of a team that were competing in the infamous New Jersey bird race. They were up against some stern competition including a team from the Cornell Lab of Ornithology. This was a fundraising competition where birding teams would compete to find out who could see and hear most species in a 24-hour period. As it transpired, the Cornell team had a trick up their sleeve as they had already amassed a great understanding of the night flight calls made by many North American species. A skill and resource Mark and Arnoud's team were so desperate to acquire. Eventually, to level the playing field, one of the North American noc-mig pioneers, a man called Bill Evans produced a tape, detailing the night flight calls of the North American thrushes, which Mark and Arnoud took back to the UK. Magnus went on to explain that he himself had been inspired by this great work and began undertaking noc-mig research as both a hobby and for the Sound Approach archive. Over the last several decades North American birders and researchers had been night sound recording mainly along the East flyway of North America sound recording, identifying, counting and then logging all the night flight calls made by the North American warbler, thrush, tanager, oriole, vireo, cuckoo, sparrow, and wader species. This spurred Magnus on to carry out his own 'noc-mig' work in Europe where this type of monitoring had never really been carried out. He initially started dabbling with dusk and dawn recording in Holland where he was living, and then had a more serious go down in Portugal when he moved. This all sounded too exciting and once Mark and Magnus had planted the seed there was no turning back. Mark also explained to me about the experiences he'd had with Dick Forsman in Finland many years ago when sound recording owls at night, that big numbers of Common Scoter would regularly fly over in the hours of darkness in between Hawk Owl calls. So, on the night of 24th March 2015, I carried out my very first noc-mig recording session in my back garden in Lytchett Matravers. It was largely uneventful, but I did record several Redwing and Blackbird calls which spurred me on to try again over the following nights. After a bit of trial and error I found the best recording spot in my garden and played around with the settings on my recording device, and it was during the following few nights when things began to get really interesting.

I live in Lytchett Matravers, which is about 2.5 miles north west of Poole Harbour. My village is also right on top of a hill, roughly about 90m above sea level, so any birds entering or leaving the harbour in a southerly or northerly direction will quite often fly right over. What I wasn't expecting during those first couple of night recording sessions from my garden was to be faced with a number of calls that were certainly familiar to me, but completely out of context. On the second night of recording a Moorhen flew right over my microphone, then a Coot the following night and then a flock of Shelduck and a Water Rail the next night. Within a couple of nights, I'd added four new bird species to my garden list that I'd never considered in a million years. It was about this time I phoned Nick Hopper who unbeknown to me had also been inspired by Magnus's night time shenanigans several months earlier and had trialled a few nights recording at Portland Bill with great success. I explained to Nick that I'd been getting a really interesting range of species over my garden and wondered if he'd start doing the same at his house. Magnus was also continuing to night record in Portugal and so for the rest of 2015 and into 2016 we all night

recorded constantly, shared recordings, quizzing each other, baffled each other with 'mystery sounds' and began unlocking a fascinating story.

I suppose one of the biggest questions is why do some species migrate during the day and why do some birds migrate at night? Many bird species use the cover of darkness to migrate, each with a different reason and strategy for doing so. Firstly, migrating at night is safer. Raptors don't tend to be active so flying in an open sky at night allows birds to travel quite a distance with little or no risk of becoming a midnight snack. Secondly, the weather tends to be better at night with winds easing, temperatures falling and air pressure dropping, all making the conditions for flying long distances easier. Interestingly you tend to find that longer distance migrants fly at night and a good example of this is Tree Pipit and Meadow Pipit. In August our night sound recordings pick up big numbers of night migrating Tree Pipits moving south as they head down to sub-Saharan Africa. They do this because they can cover long distances at night before making landfall at dawn to feed. Whereas the Meadow Pipit, another species that moves down through the UK later in the autumn in big numbers is rarely ever sound recorded at night. This is because many Meadow Pipits only arrived from mainland Europe or Northern England, meaning they tend to migrate shorter distances in the early part of the morning as they don't need to go so far. Finally, a bird's feeding strategy is another driver for why it may want to migrate at night. Birds that can forage easily, such as waders, will travel long distances at night, knowing full well they'll easily be able to locate a water body, set of fields or shoreline to feed at the next morning. Whereas specialist feeders like finches almost exclusively migrate at dawn for a few hours as they have to actively locate seed rich areas to feed in. They simply can't run the risk of migrating all night and not be able to find a food source in the morning.

When you begin a new and regular bird monitoring method it's likely that, at some point, you'll learn something new, or discover something interesting. We were all 'noc-migging' a lot during 2015 and inevitably there were calls I simply didn't recognise. These I would save away for a rainy day, hoping that one day I'd be able to identify them and add them to my archive. On the night of 17th August 2015, I had my recording gear out in my back garden and as was typical, began going through the sound files early the next morning. At about quarter past midnight the night before my gear picked up a single 'plik' call, which to me meant nothing. However, I saved it and continued to scan the rest of the nights sound files. A week later we were at The British Birdfair with the Sound Approach team and I played Mark and Magnus my mystery call, to which Magnus's eyebrows raised fairly quickly. First asking where I had recorded it, Magnus then quick as a flash said that the call was a perfect example of an Ortolan Bunting call type. In 2016, I decided to move my nocturnal listening station to a site within Poole Harbour. This was partly to begin a study of night migration within the harbour area, but also to allow me to place the listening station on a more prominent migration route. I had hoped this would result in a wider variety of species and greater numbers of individuals. My new listening station was at the top of a four-story building in the centre of Old Town Poole, an urban environment with virtually no vegetation in the surrounding area to support either resident or migratory birds.

Due to the lack of habitat locally, any birds recorded overhead during the night at the appropriate season were very likely to have been migrants. Noise from traffic and the local ferry port could sometimes be infuriating, but the expectation of greater variety and numbers proved to be correct. Plus, it's been scientifically proven that birds call a lot more at night over towns and cities due to the increased light levels. Spring recording was productive with good wader passage and an unexpectedly large Redwing movement in March 2016. Autumn recording commenced on the 1st August 2016 and remained steady with a good range of wader calls, until 22nd August when I came across a single *tew* call that caught my attention. Much better was to follow the next night when, as the local church bells struck 2am I recorded a long medley of *tew* and *tslew* calls of an Ortolan Bunting approaching and flying low over my microphones. The following night, I recorded three sets of Ortolan Bunting calls during the course of the night. This late August wave coincided with the first visual records for the autumn at coastal sites such as Portland Bill and Hengistbury Head, as well as other sites on the south coast. Between 25th August and 12th September 2016, I recorded a further eight sets of Ortolan calls, bringing my 2016 total to 13 recordings in just 22 days. After this date there was no further sign of them in my night recordings, and visual records by day also tailed off across the county. It will come as no great surprise that I never saw or heard an Ortolan near the Old Town Poole listening station during the day. This was an amazing discovery, complemented by the night recording Nick Hopper was doing at Portland during the same period. His night recordings were also a huge eye opener and on the night of 25th August 2016, Nick had 10 sets of Ortolan Bunting calls over his microphone during the course of the night at Portland Bill, followed by 2 sets of calls over Stoborough a few nights later and then 6 sets of calls again over Portland on the night of 5th September. To provide some context, there are only around 25-30 visual Ortolan Bunting records logged across the UK each year. What we had learned was that despite Ortolan Bunting being an incredibly scarce autumn migrant in Dorset each year, they're in fact a regular night migrant over Dorset air space. In fact, since 2016, we've night-recorded plenty more Ortolan Bunting with Nick and I both hearing them 'live' over our gardens, and can advise that listening to the night sky between 20th August and 5th September, especially if there's a light south-easterly wind and low cloud cover, could result in one or several flying over your own houses. You just need to learn their calls, be patient and have hope!

Noc-mig has turned up plenty more interesting discoveries in recent times. For example, in the early part of lockdown 2020, birders across the country all stood in their back gardens at night listening to Common Scoter passing over their houses, regardless of whether they lived in an urban or coastal spots. This came about after news spread quickly via social media that birders who had been night sound recording a few nights previously had picked up big numbers of Common Scoter moving across the UK. The quick dispensing of news allowed those without recording gear to listen live, and were promptly rewarded for their efforts. In April this spring a newcomer to noc-migging hit the jackpot by sound recording a Great Spotted Cuckoo over his garden in Gloucestershire. A first noc-mig record for the UK. This species calls frequently at night whilst on migration in areas within their native range, but to get one on your garden list in the UK is exceptional (and rather jammy).

If you want to give this experience a go then you don't need expensive sound recording equipment. In fact, you don't need any equipment full stop. What you do need though is patience and a warm jacket. There's no doubt there are times when birds call more frequently than others. For example, in late autumn, if you get a night of good thrush passage then Redwing, Song Thrush and Blackbird flight calls can be heard very frequently. If you listen long enough you can also be rewarded with the calls of species such as Fieldfare or Golden Plover too. In early autumn, if trying for Ortolan Bunting, you may also be lucky enough to hear migrating Common or Green Sandpiper as well as Spotted Redshank or Common and Arctic Terns. In the spring, passage Whimbrel are very easy to hear just after sunset and migrating Bar-tailed Godwit can often be heard chattering as they pass in the darkness. And regardless of the time of year, there are several species that everyone seems to get when they listen long enough such as Water Rail, Moorhen, Coot and Little Grebe.

In terms of resources there are now several excellent places to listen to or read about nocturnal migration:

The Sound Approach have a page on their website dedicated to this topic and upload new recordings and a detailed analysis for different species regularly: www.soundapproach.co.uk/night-flight-calls/

The Xeno-Canto website now hosts thousands of noc-mig sound recordings from across Europe, uploaded by keen amateur noc-miggers. A word of caution though, as not all recordings are verified: www.xeno-canto.org/

To learn about some of the different equipment options, a new noc-mig website was created last year and provides a great overview of the processes and pitfalls that occur: www.nocmig.com/2020/04/15/nocmig-top-tips/

And finally, a selection noc-mig recordings from our Old town Poole listening station covering 33 different species [recorded over the first four years] can be found on our Birds of Poole Harbour website: www.birdsofpooleharbour.co.uk/poole-harbour-night-flight-calls-aug-2016-nov-2018/

The last six years have been a real eye (and ear) opener for me, allowing us to unpick and reveal what's truly going above when we're all tucked up in bed. There's no doubt there's still plenty more to learn and more fascinating discoveries to make but in the meantime, why not give noc-mig a go. Because there's one thing I can guarantee, the moment you hear your first Green Sandpiper, Whimbrel or Ortolan Bunting flying over your garden... there's no turning back.