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Since discovering the Berwickshire Small Blues in 2007 at Catcairn Bushes south of Burnmouth, these little butterflies have occupied quite bit of my time through to now the 8th season. In that time I have learned a great deal about this one species, but I have so much left to learn. That was hammered home to me this summer, as four new colonies have suddenly sprung up, a few expected and a few very much unexpected.

The Small Blue Survey was initialised in 2012 to monitor potential sites on the Berwickshire coast, and also the grasslands north of Berwick upon Tweed and further south of Spittal, Cocklawburn and Cheswick. 2012 was a very successful season as it turned out, both for surveying and the welfare of the butterfly. 2012 also coincided with the most unusual and spectacular Kidney Vetch bloom. If I was in doubt about this plants ability to take advantage of perfect conditions, those were dispelled immediately and naturally the butterfly has echoed the plants success in subsequent seasons to now. At this moment the known distribution of the butterfly has expanded from Catcairn Bushes south to Lamberton Beach and to the north at Daring, now covering 3 miles of coastline. But it was the discovery this season of an inland site with 2 adults a good 5 miles from Burnmouth that has made anything at all possible in the future. 5 miles would mean that the butterfly could be anywhere from Berwick upon Tweed to the south and St Abbs Head in the north. So there is much work to do in identifying these expanding colonies throughout the search area.

As always, help in surveying the coastal strips is much appreciated from anyone with some time to spare. I realise that most folks have their own agendas and projects in these summer months and time is precious, so it is not easy to find folks willing to spare that time. The way forward for monitoring and recording lies with the local communities themselves in my view. And I started that quite successfully this past season at Burnmouth. Introducing communities to the wildlife on their own doorstep is the key. It has made little sense to me that only we folks in the know have any idea of what needs protecting and what’s out there to see. So I will try to expand on the theme next season.

For those of you who have supported and taken part in surveys and given me information...a huge thanks.

Iain Cowe
1. Potential new sites discovered

2014 has been quite a year for Berwickshire’s Small Blue. Where to begin.... New sites for the butterfly have been surveyed relentlessly for the past few years now with some results on the positive and others on the negative. This past season has proved that all that hard work in the field was worthwhile, yet, the Small Blue have greatly surprised me with their ability to discover suitable breeding sites at what appears to be great distances from the existing confirmed colonies.

2014 has seen 4 new sights colonised, or I should say potentially colonised. The proof will be how things level out into 2015 and beyond.

The first new discovery of 2014 took place at Partanhall on the 21st of May. It was a routine count of Wall Brown, Small Copper with an anticipated early Northern Brown Argus that I was there for that day....not Small Blue. However, 1 Small Blue adult male appeared from nowhere by the trackside to my astonishment. This appeared to be a lone butterfly, yet sightings of a single Small Blue at the Partanhall site persisted from a few weeks beyond that initial sighting suggesting perhaps a few more. Partanhall has very minimal Kidney Vetch present, in fact, I was unable to locate any evidence of the plant on the sharp slopes overlooking Burnmouth harbour, and only have a few records of it throughout the years here. It is possible that Kidney Vetch exists a little higher up the slope in the more inaccessible areas. I don’t expect to see more than the odd one or two butterflies in the future at this site....never the less that was a quite exciting discovery.

The second new discovery was quite extraordinary. On the 8th of June while on a count of Northern Brown Argus at Blaikie Heugh up beyond Fancove that I was suddenly aware that the little silvery butterflies in front of me were not Northern Brown Argus but Small Blue!! Not one or two, but a good dozen of them. How!!? I could not believe what I was seeing. The Blaikie Heugh shelf has always had potential to be the next colonised site as it lies roughly 800 meters north of the Kings Gardens colony and has always had all the ingredients necessary, this was a surprise nonetheless, as I had expected to find perhaps a few adults...not this many so suddenly.

I had barely came to terms with this latest discovery when I was completely stunned to find 2 adult Small Blue on the very next day the 9th of June, a clear 5 miles inland from established coastal sites at Burnmouth at Causewaybank Quarry. I had looked for Small Blue here in the past and had pretty much given up on the idea despite there being potential. This was quite a discovery and one I treated with initial caution as this was way out of left field. After consultation with a few folks online, including my thanks to Nick Cook for his insight and knowledge and Barry Prater for his support, we concluded tentatively that this discovery was indeed genuine and not some unofficial release of some kind. The 2 adults 1 male and 1 female were actually on the north facing slopes of the quarry where there is quite a flush of Kidney Vetch, yet on the south facing slopes....where I would likely find this species they were absent as yet. This will be very interesting to see what happens next. It is very difficult to imagine Small Blue roaming the open countryside looking for patches of Kidney Vetch inland, as Kidney Vetch is very thinly spread away from the coast. One theory is that the Small Blue are using the old railway line as a corridor from the coast. I have in the past found Northern Brown Argus and Small Heath at this quarry site well away from their traditional coastal strongholds. The Northern Brown Argus being of great interest considering that its food plant, the Rockrose does not even exist here. It is a great mystery, but an exciting and very interesting mystery. I returned to the quarry site on several occasions since the 9th of June and found no more adults, so concentrated on combing through the Kidney Vetch heads for eggs and found after a long and tedious search 1 hatched egg on the 10th of July.
A solitary male Small Blue at Partanhall among the Rockrose on the 21st May.

This female one of the first spotted on the 8th June at Blaikie Heugh high above Hurkers Haven.

Female Small Blue prospecting for Vetch heads at Causewaybank Quarry on the 9th June. A 5 mile distance from the coastal colonies.

An egg laying female on the Blaikie Heugh shelf, on the 11th June.
The Blaikie Heugh shelf lies above Hurkers Haven and is 800 metres north of the Kings Gardens colonies. Despite careful searches of food plant throughout the years leading up to this population explosion, I had not a clue that they were there...until now. Kidney Vetch does very well here, and Small Blue associates are strong, especially the large drifts of Wood Vetch that Small Blue for whatever reason, seem drawn to for cover. The Northern Brown Argus has a particularly healthy colony here as well, making this site quite exciting despite its small size.

Returning to the Blaikie Heugh site on the 11th of June I counted 21 butterflies, almost double the number from a few days before. This time I found mating pairs and laying females and eggs among the Kidney Vetch heads. It was all a bit much to take in...as you can imagine after a few years of fruitless searches to be suddenly be faced with an abundance of wealth.

Things were to get even better as June progressed. The 16th of June I returned to the Blaikie shelf. On my way up from the coastal path from Eyemouth at Daring, a heathy headland a good 800 meters further north of Blaikie Heugh I flushed a small butterfly. Unfortunately it escaped...I was convinced it was a Small Blue, but could not prove it. I continued up to Blaikie where I was astounded to see a further increase in numbers of Small Blue, with a conservatively counted 30. There were many more among the Wood Vetch stands all the way along the shelf in little groups of 4 and 5. What a sight!! A sea breeze brought drifts of Small Blue and Northern Brown Argus up over the cliff adorned with Rockrose and Kidney Vetch into a mixed flock of tiny butterflies spinning among the grasses. The wind would abate momentarily and they would settle, the slightest wisp bringing them all back up into the air again. So I was on cloud 9...nothing could better that sight. But I was wrong. Heading back to Eyemouth I slowed a little at the spot I thought I had seen a Small Blue earlier in the day...and would you believe it...a Little Blue skipped from the grasses under my foot to alight perfectly on Bird Foot Trefoil... I was quite disbelieving, as is the theme. I decided to look for any nearby Kidney Vetch to look for proof of any colonising going on here. A few scraggy Kidney Vetch were found clinging to the edge of the cliff. Every single plant had at least 1 egg some multiple...more questions than answers...I felt quite out of my depths. Searching further around the headland I found more eggs, the more I looked the more I saw...WOW!!
A view south towards Scout Point and Daring. Kidney Vetch is sprinkled quite liberally along the tops of these rugged cliffs.

The three new coastal sites and the original Kings Gardens site north of Burnmouth.
Small Blue, I think a male at Daring, a heathy headland just south of Eyemouth on the 16th June.

It is quite difficult to see from this photo, but there are 2 eggs here, one on the top bud and another on the lower bud to the left of that insect. Daring, the 16th of June.

On the 29th of June I revisited Blaikie and found very few remaining adults and a few hatched eggs. And further up the coast at Daring found several hatched eggs on the few plants dotted around the headland. On further examination I was able to find more hatched eggs than I had found whole eggs a few weeks previously. It was the final instar larvae I would need to see next, and for that I had to wait a few weeks. So, on the 17th of July I returned to both Blaikie and Daring. I was disheartened not to find anything at Blaikie at all. These larvae are devilishly disguised, and when faced with so many heads to check, it can lower morale quite quickly...so I failed to find anything. I trooped of down to Daring fingers crossed. At Daring my chances were far higher of finding something as there were so few plants to look at. On arrival I noticed that most of the heads had gone over and set seed, not a good start. However on the very edge of the cliff where the sea spray no doubt gave that little extra moisture I found some larvae. It is very satisfying to follow through the stages of the butterfly from adult to larvae and with some luck in 2015, the adults again.

My overall view of these 4 new sites is that Blaikie Heugh has the best chance of survival beyond a few years, followed by Daring. Daring though may well just be a stepping stone to the richer grounds further north at Eyemouth where Barry Prater sighted adults a few seasons ago. The inland site at Causewaybank may surprise me, but I did not find enough evidence of numbers for sustainability long term. If these butterflies were from coastal origin...then adults from the coast would have to repeat that mighty 5 mile flight to reinforce any survivors. At Partanhall I found little to no evidence that a colony is possible to survive any length of time due to the lack of food plant. Next season will be very interesting indeed.
The Catcairn Colonies continued to prosper in 2014 with the first butterflies showing up on the 13th of May along the coastal path. On the Catcairn slope itself, the flight season was a lot briefer than it has been in former years due to prolonged dry and sunny weather. The Northern Brown Argus colonies also showed this to be a common case among other species with an explosive emergence and sudden drop in numbers with no fresh specimens being seen at later dates.

The colonies at Catcairn are quite spread out now, with one on the lower scree slopes and another quite separate on the coastal path that overlaps into the rail sidings. Other satellite colonies occur above Hilton Bay and Lamberton Beach. What is surprising is that any Kidney Vetch no matter how unlikely is being utilised by passing females.

The coastal strip is currently under new management from Catcairn south to the border. The idea is to have a nature reserve in place here. We have had some input into the project, but up to now it is quite difficult to see a clear strategy to promote the butterfly itself. The project manager is though very aware of the butterfly’s presence, and it remains to be seen how we can go forward.

Grazing levels are my only concern on the coastal strip. We had a discussion about this with the Project manager and discussed the problems that could occur with overgrazing and indeed under grazing. As it all turned out, 2014 was a very famous year for the coastal strip at Lamberton south to Catcairn with the Sheep grazing ceasing at just the optimum time to reveal a riot of colour along the sea bluffs and importantly for the Small Blue a good spread of Kidney Vetch in flower without the threat of being munched to early.
The Small Blue were first seen this past season the exact same day as the first of the Catcairn clan on the 13th of May. A very quiet season for this loosely spread colony with peak numbers in early June then sharply dropping off by mid-June. Some very good patches of fresh Kidney Vetch up the slopes could be seen, so hopefully a better season lies ahead. Winter storms probably account for the lower numbers on the site this year as the Kidney Vetch does prosper in less violent times right on the strand line and Small Blue do use it.

This season across all sites I recorded 151 adult Small Blue that is 10 more than last year. So, no real change despite the discovery of those Small Blue numbers at Blaikie Heugh. The flight season was quite short compared to other years, with a very short burst in numbers in early June. I detected no second brood butterflies throughout August, I suppose it remains a possibility that a few butterflies do emerge again in late summer...for example I heard that Small Blue on the south coast of England this year pushed out a 3rd brood!! Very unusual and doomed to failure as the Kidney Vetch by early autumn is very much long gone. And that seems to be our problem with second brood butterflies; Kidney Vetch has a short flowering season with very few late second blooms.

Immediate threats to the Small Blue colonies are few, however trampling by large footed bipeds, including myself, remains a minor problem, yet Blaikie Heugh is from time to time in mid-summer visited by a few campers, who, on such a small site make quite an impact. One such camp appeared this summer, happily a good few weeks after the adults had disappeared. Another larger camp was seen at Kings Gardens, but I expect that won’t be a problem on the sheer grass slopes where most of the butterflies are. Catcairn has also been a make shift campsite, but that is rare.

Grazing is quite a considerable problem, mostly the lack of it, especially where scrub and grasses are becoming rank. The general picture though is favourable, at the moment.

18th May Catcairn Bushes

15th June Catcairn Bushes
I managed to cover the coastline north of Berwick between Needles Eye and Marshall Meadows twice this year, once in late June and another visit in July. I would have been too late to see adults, however I checked as many of the flowering vetch heads as I could with no positive outcome. Kidney Vetch was in very good order at Needles Eye. This grassland is potholed by large patches of Yellow Rattle, and among those potholes are vast amounts of Kidney Vetch. I have the feeling that without the Yellow Rattle a lot of the Vetch would be smothered by the ranker grasses. The photo below illustrates the association these plants and others have with the grass draining effects of the Rattle.

I also managed one sweep south of Berwick in late June from Cheswick to Spittal. I am always amazed how few butterflies I encounter on this flower saturated stretch of coastline around Cocklawburn. I found plenty of Kidney Vetch with no sign of Small Blue activity, or, of their ever having been any. Further up the coast towards Spittal there are some very likely spots, but still nothing doing. Grazing is excellent on these dune systems and cliff tops south of Spittal. Cattle grazing, on soft steep slopes looks quite destructive, however it is fertile breeding grounds for the spread of Kidney Vetch, I noted that Kidney Vetch had increased its hold because of that this year.

I must find time to cover this stretch of coastline in flight season instead of being too late and having to look for eggs...which is just frustrating and tedious when faced with so many flowering plants. Considering the Small Blue has the ability to cover a few miles of open ground, I am expecting to see Small Blue in the north of England soon.
A lot more ground to cover next year with all these new sites and potential for more nearby popping up, so it will be frantic come what may. The epicentre of Small Blue activity still focuses on Burnmouth and its immediate surrounds. For that reason I have been trying to involve the local community, which as I said, did have some success with in late June this year. I will look at a field trip perhaps in late May to serve that purpose. There may be a chance to involve Eyemouth community at some stage as well. Berwick Wildlife Group monitor butterflies at Cocklawburn each and every season, if anything turns up there I know they will find it. The stretch of coastline from Daring north to Eyemouth Bay now has every chance of seeing butterflies next season. I must also compile a list of plant and insect associates that I have observed throughout these 8 seasons and are keys to identifying suitable habitat for the Small Blue.

Anyone looking for more detail on sites to survey can contact me at orb@lammer.orangehome.co.uk or there are 2 previous publications covering 2012 and 2013 that can be found here http://www.eastscotland-butterflies.org.uk/publications.html.

If 2014 is anything to go by, 2015 should be fun.

Iain Cowe October 2014
Overlooking Burnmouth Harbour, the epicentre of the Small Blue colonies in Berwickshire.