Ng6 – NORTHERN BROWN ARGUS EGG COUNT METHODOLOGY (draft)

INTRODUCTION

Northern Brown Argus can sometimes be challenging to monitor by traditional methods. Their colonies are often quite small with a protracted flight period which, when combined with poor weather conditions across its range, can prove challenging for carrying out weekly adult counts throughout the flight period.

There is a need to supplement our transect data with counts from additional methods which, if successful, would enable our population trends to be more robust in the future. This guidance note sets out a method for sampling Northern Brown Argus populations through searches for their eggs.

Northern Brown Argus eggs are laid on the upper surface of the foodplant Common Rock-rose (*Helianthemum nummularium*) and are relatively conspicuous (see images below). They are small and white coloured, and when viewed using a hand lens they have a sea urchin like appearance. These eggs can be readily counted during surveys, with the advantage of being detectable when the weather restricts adult activity.

Northern Brown Argus eggs laid on Common Rock-rose and a close up of an egg – courtesy of Jim Asher.

WHEN?

Time of Year: These counts will need to be conducted during the Northern Brown Argus flight season. First counts should be conducted a couple of weeks after adults have emerged, before numbers reach their peak. This will vary depending on the site, latitude and seasonal weather but will typically be from mid-June onwards.

Time of day/weather conditions: Egg counts should be conducted during daylight hours when visibility is good. The usual restrictions for adult counts do not apply, as the eggs remain in-situ and their detectability is largely undiminished by poor weather conditions.

WHERE?

Survey design: You can carry out egg counts at any site where the foodplant Common Rock-rose is present and which supports a Northern Brown Argus colony (or has supported a colony recently, or has strong potential to support a colony).

At each site, you will need to identify a patch of suitable habitat which is representative of the site as a whole. It is important the selected patch fairly represents habitat condition across the whole site, and not just the best bits, so that positive or negative changes can be observed in the long term. As a guide, the patch could take **up to 30 minutes** to search systematically for eggs. At smaller sites you may be able to survey all the available habitat in that time.

HOW?

Recording method:

- You will need to systematically search the upper leaves of Common Rock-rose for Northern Brown Argus eggs, recording the number of hatched and unhatched eggs encountered. *You only need to search the upper leaves of the plant*.
- Carry out the count by traversing across the site in a zig-zag pattern, making sure to sample in both highly suitable and less suitable areas.
- At the beginning of your count, check your watch or start a timer so that you can record the amount of time spent searching.
- Ensure your search rate is consistent throughout the search, don't spend too long on any one plant, as good coverage across the site is needed. Whilst you will need to stop at regular intervals during the search, in order to get close enough to the food plant to check for eggs - we suggest not searching in any one small vegetation patch for more than 60 seconds to avoid bias.
- Keep the timer running when crossing patches of sparsely vegetated or unsuitable habitat.
- Once you have completed your survey across a representative area of the site, check your watch again or stop the timer. You will need to record the total number of eggs seen and the time taken for the count. This will give you an encounter rate.
- You will need to repeat this survey at **weekly intervals** until it is clear from the results that the peak of the season has passed and the number of eggs is falling. The annual index for the site will be taken as the encounter rate (eggs seen per hour) during the peak weekly count.

Data Entry: Results from your Northern Brown Argus egg counts can be recorded on the form below and sent to UKBMS staff via transect@butterfly-conservation.org once completed. Alternatively, you can record your counts using the iRecord Butterflies mobile phone app – use the timed count facility for single species, and ensure that you select the correct life stage for your count.

If you have any queries or require assistance, please contact
transect@butterfly-conservation.org

NORTHERN BROWN ARGUS EGG COUNTS – RECORDING FORM (draft)

Site Name:		County:
Grid Reference:	Landowner details:	Name of associated transect route (if applicable):
Site Map:		

Recorder Name:	Comments:

Date	*Duration of search (mins)*	*Number of unhatched eggs*	*Number of hatched eggs*	*Total number of eggs*

Data should be sent to transect@butterfly-conservation.org by 30th September each year.

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