

Bird flock estimates from Eurosite webinar delegates

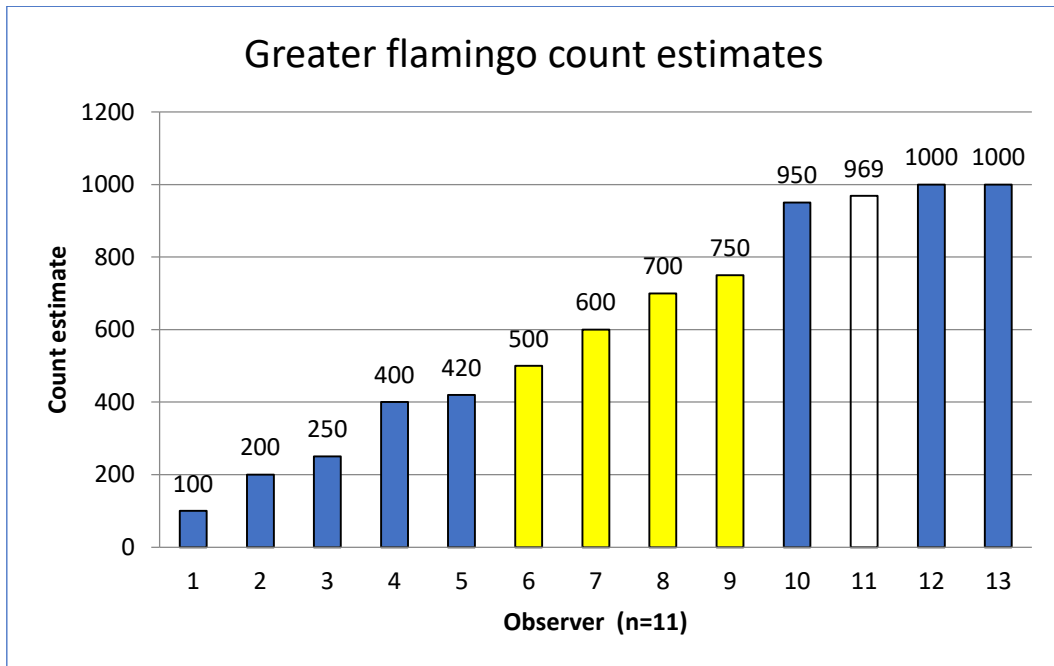


Figure 1. The flock count estimates for the greater flamingo (*Phoenicopterus roseus*) image shown in the Eurosite webinar. The yellow bars represent estimates from experienced birdwatchers; the bar without a fill was the actual number of birds in the image, as counted in a manual count in ImageJ.

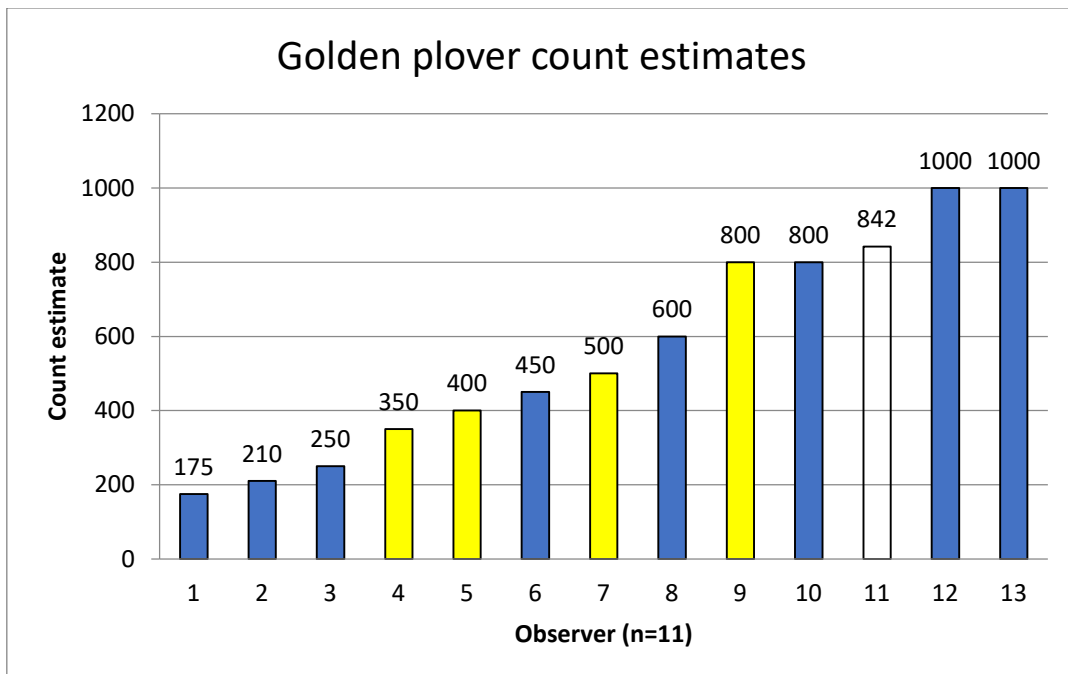


Figure 2. The flock count estimates for the golden plover (*Pluvialis apricaria*) image shown in the Eurosite webinar. The yellow bars represent estimates from experienced birdwatchers; the bar without a fill was the actual number of birds in the image, as counted in a manual count in ImageJ.

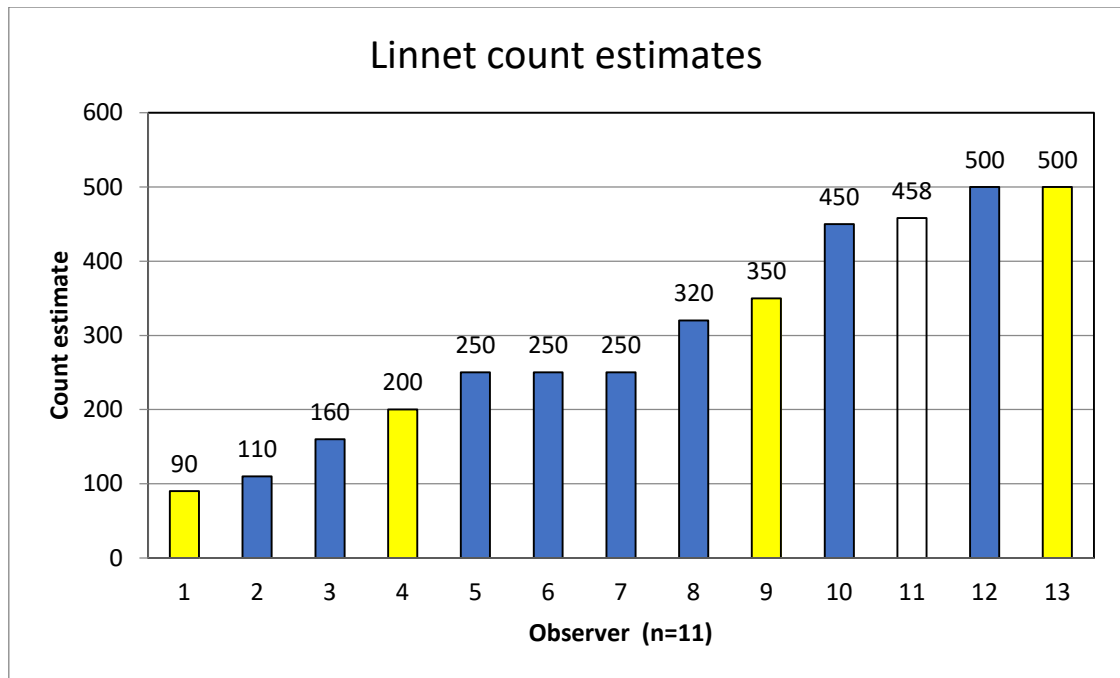


Figure 3. The flock count estimates for the linnet (*Carduelis carduelis*) image shown in the Eurosite webinar. The yellow bars represent estimates from experienced birdwatchers; the bar without a fill was the actual number of birds in the image, counted using a manual count in ImageJ.

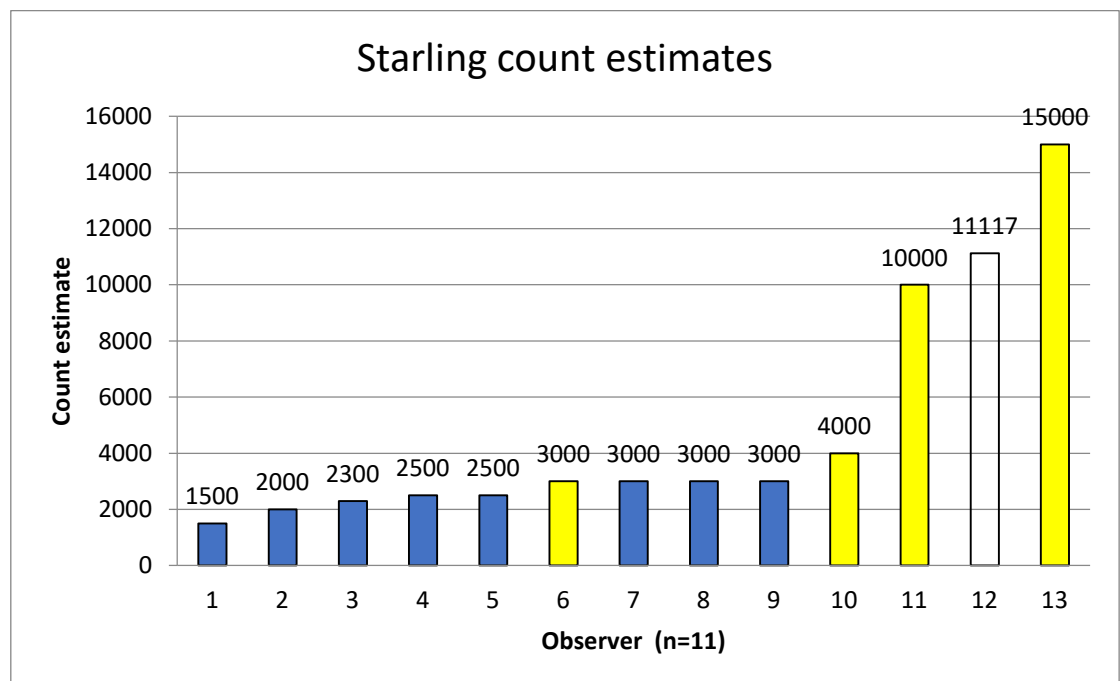


Figure 4. The flock count estimates for the starling (*Sturnus vulgaris*) image shown in the Eurosite webinar. The yellow bars represent estimates from experienced birdwatchers; the bar without a fill was the actual number of birds in the image, as estimated in an automatic count in ImageJ.

Table 1. Summary data from the Eurosite webinar count estimates

| Species | Number of birds in image | Range of variation | Median | Scale of median underestimate (%) |
|------------------|--------------------------|--------------------|--------|-----------------------------------|
| Greater flamingo | 969 | 100-1000 | 550 | -43 |
| Golden plover | 842 | 175-1000 | 475 | -44 |
| Linnet | 458 | 90-500 | 250 | -45 |
| Starling | 11117 | 1500-15000 | 3000 | -73 |

Summary

Figures 1-4 show the results of the observer variation exercise provided by the webinar participants. These reflected the results of the previous observer variation sampling trials, with 80% or more of the observers underestimating the number of birds in the images. The results provided by the webinar delegates had a more restricted range of variation, but this might be partly due to the smaller number of participants. However, the scale of the underestimates was even greater than in the previous trials. There was no obvious improvement in the estimates provided by the more experienced observers: in fact, in two of the four images the less experienced observers provided the closest estimates.