

Abstract

One of the best ways how hosts may defend their clutch against brood parasitism is recognition and rejection of parasitic eggs. It has been documented that ability to percept UV light in birds affects their behaviour. By using a spectrophotometer we found that Reed Warbler (*Acrocephalus scirpaceus*) eggs and Common cuckoo (*Cuculus canorus*) eggs differ mainly in brightness but also in UV hue. We investigated the influence of birds' UV vision on recognition and rejection of parasitic eggs. Therefore we performed three experiments to reveal the role of eggshell UV reflectance on egg rejection in this host. In the first experiment, we parasitized clutches with artificial white eggs differing only in UV reflectance (UV- and UV+). In the other two, we experimentally reduced UV reflectance from conspecific and host own eggs. We used a UV light blocker, which did not influence the reflectance shape in the other parts of spectra. As a control we used a group of conspecific and own eggs coated in Vaseline, which did not affect eggshell reflectance. In each experiment, we monitored host response to parasitic eggs. Because the Reed Warbler's eggs reflect UV radiation themselves, we expected that white UV- eggs would be rejected as well as the eggs coated in UV blocker at a higher rate than white UV+ eggs and eggs coated in Vaseline, respectively. Contrary to our prediction, we found that white UV+ eggs were rejected more often than white UV- eggs. Eggs coated in UV blocker or Vaseline were in most cases accepted and did not differ in rejection rate. Thus it seems that birds can use UV part of spectra for the recognition of parasitic eggs, but it does not play a key role. Moreover, we did not confirm the hypothesis that a lower intraclutch variation in host egg appearance facilitates the recognition of parasitic eggs. Finally, we found that strength of parasitic eggs may influence the mode of their rejection by the hosts.