



## NOTE

### A new locality for *Euchrysopteryx osiris* (Hopffer, 1855) in Sohar, Oman

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Otto, Herbert H.H.<sup>1</sup> & Larsen, Torben B.<sup>2</sup>

<sup>1</sup> Unit of Environmental Sciences and Management, North-West University, P. Bag. X6001, Potchefstroom, 2520, South Africa. E-mail: [herbertotto@hotmail.com](mailto:herbertotto@hotmail.com) or [24765627@nwu.ac.za](mailto:24765627@nwu.ac.za)

<sup>2</sup> Jacobys alle 2, DK 1806 Frederiksberg, Denmark. Research Associate, Natural History Museum, London. E-mail: [torbenlarsen@btinternet.com](mailto:torbenlarsen@btinternet.com)

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## INTRODUCTION

*Euchrysopteryx osiris* is widespread in Africa but it is rarer in Oman on the Arabian Peninsula, where *E. osiris* has been recorded from the southern Omani forests and grasslands of Dhofar (Larsen, 1980); at Aqabat al Hatab, Zeak Camp, Sarfait, above Rakhyut and Khadrafi (Larsen, 1983); while Polak and Verovnik (2009) found two males at Tawi Atayr, Salalah. In this paper *E. osiris* is recorded from Sohar in northern Oman approximately 859 km NNE of the previous records ([www.distancecalculator.globefeed.com](http://www.distancecalculator.globefeed.com)).



Figure 1 – Localities for *Euchrysopteryx osiris* in Oman

Since *E. osiris* is very similar to *Chilades parhassius*, which is known to be abundant in northern Oman, Larsen requested specimens to be collected to confirm identification, but the first specimens sent proved to be *C. parhassius*.

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## OBSERVATIONS

On 7 November 2014 a neglected bean field, overgrown with grass and next to a wadi (stream or river) was visited. Such sites are ideal for *Euchrysopteryx* species (Otto – personal observations). A small but flourishing population of *E. osiris* butterflies with two characteristic orange lunules on the hindwing (Figs 2–4) was found, both males and females, many freshly hatched and in perfect condition. The female hindwings varied from dark to light (Figs 2 & 3).



Figure 2 – ♀ *E. osiris* with darker hindwing



Figure 3 – ♀ *E. osiris* with lighter hindwing

The males were fairly typical of Nigerian dry season forms (Figs 5–7) with wet season individuals usually somewhat darker, yet retaining the pinkish sheen.



Figure 4 – ♀ *E. osiris* – with 2 orange lunules



Figure 5 – ♂ *E. osiris* with reduced upperside orange lunules.



Figure 6 – *E. osiris* from near Sohar, Oman. Left column males; right column females.



Figure 7 – *E. osiris* right: male upperside with reduced orange lunules; left: male underside with orange lunules

Further confirmation that these butterflies were indeed *E. osiris* was that the females were ovipositing on cultivated fodder cowpea plants *Vigna unguiculata* – Fabaceae, a known larval host plant for the species. The creeper *Rhynchosia totta*, another known larval host plant for *E. osiris* (Otto, 2014a), was also found in the general vicinity. By contrast, the larval host plants of *C. parhassius*

(*Acacia* and *Prosopis* species – Larsen, 1980) were not present.

Females preferred to oviposit on selected *Vigna* plants, which were in fruit with many ants present, partaking of plant exudations from near the fruit. Unusually, several eggs were laid on the edges of leaf surface undersides, whereas most lycaenids (including *E. osiris*) normally lay eggs on flowers, buds or in axils.

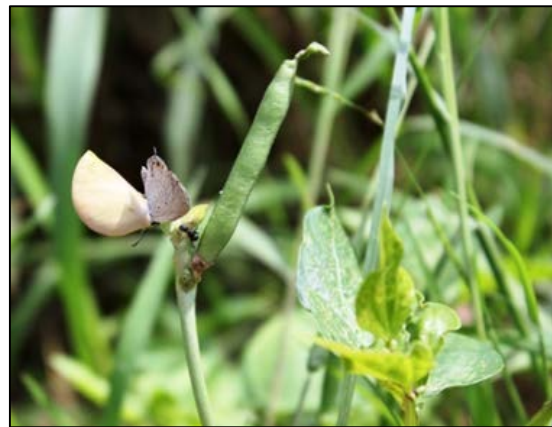


Figure 8 – *Vigna unguiculata* with inferior leaf quality, an inspecting female *E. osiris*, attending ant and oviposited egg on seed pod.

Six eggs were counted on an inferior quality (possibly virus-infected), black-speckled and yellowed leaf (Fig. 6) – this is also unusual since females normally prefer younger leaves, buds or axils on which to oviposit (Schoonhoven *et al.*, 2005). On closer inspection two of these eggs were grey and possibly unviable.

On a second plant, with ants in attendance, a flower and a seed pod had eggs prominently laid on them – possibly to ward off future females searching for an ideal oviposition spot. This plant was visited by three ovipositing females and one nectared from the flower while inspecting the site. A third plant was observed with females flying underneath the low foliage to oviposit. No attending ants were observed in this instance, but they may have been present.

On the creeper *R. totta* (c. 30 m away) a female was nectaring from the flowers with two males in close proximity, but no eggs were laid or found.

On 21 November 2014 a female was observed c. 500m away along the same wadi but in a different bean field while ovipositing on a leaf bud. A little later, on a second plant of a larger and denser spread of prostrate branches, some 50 cm radius and merely 2 m from the first plant, a female settled again. It is difficult to differentiate whether there were two ovipositing females or merely one since both females were fresh and had no distinguishing wing damage. This female settled on a branchlet and subsequently moved down along it to the base (a different approach to the first female, yet not unusual). It inspected the axil between leaf petiole and twig then oviposited on flower buds and later on

the undersides of two different leaves.

## DISCUSSION

Interestingly, Sohar is just north of the Tropic of Cancer, whilst the observations in the KNP were around the Tropic of Capricorn in the southern hemisphere. The south of Oman receives much more rain than the north (including Sohar), which is much drier. *E. osiris* is no stranger to dry areas, being known from Low's Creek, Mpumalanga and 11 rest camps in the Kruger National Park (KNP) (Otto, 2014a), Botswana, Namibia (Timberlake & Childes, 2004) and Kenya (Larsen, 1991). *Becium* syn. *Ocimum filamentosum* (Lamiaceae) (Larsen, 1983) also serves as an alternative larval food for *E. osiris* in Oman (Larsen, 1980), Kenya (Larsen, 1991) and the KNP (Otto, 2014a).

It is postulated here that butterflies increase their distribution via cultivated crops. Bean crops normally serve as cattle fodder and are found throughout Oman. In a recent study of the legume crops of Oman, 15 of the 110 sites sampled were found in North Batinah, with Sohar as capital, most of the 64 crops being cowpeas (*Vigna unguiculata* subsp. *unguiculata*) (Al-Saady *et al.*, 2014). This provides evidence that distribution in cultivated areas is human induced, with eggs and larvae being transported with the larval host plants. In Oman *E. osiris* has been recorded utilizing both *Vigna* and *Rhynchosia* as larval host plants (Larsen, 1980). The butterflies being found in a neglected bean field supports the hypothesis that butterflies, their eggs and/or larvae are transported via domestic crops. The crops may be moved from one area to another as new fields are planted from these previously planted *Vigna* cuttings containing *E. osiris* eggs or larvae or serving as animal fodder in new areas and subsequently sprouting roots and spreading the butterfly's range. *E. osiris* has not been recorded on any naturally occurring larval host plants in the north of Oman. As with *Brephidium exilis* larvae feeding on *Zaleya pentandra* (Otto, 2014b), also found in Sohar, it is suggested that butterflies spread quickly in arid regions through domestic crops and associated weeds. Such human intervention extends the butterfly's distribution range and becomes a biogeographical phenomenon. If these two butterflies (*E. osiris* and *B. exilis*) had not adapted to the domestic crops and weeds, their distribution would certainly have been much more limited.

However, the limited and occasional food source creates a problem; if the food source is removed, the butterfly population could disappear locally. Fortunately *Rhynchosia totta* is present and will probably have ants in attendance, which would maintain the presence of *E. osiris* in the area.

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