News on the info-system of the Cesa

Our faunal series is dedicated to Yusuf Khass Hajib, an 11th-century Turkic philosopher and poet

http://zoobank.org/urn:lsid:zoobank.org:pub:96C04D90-77D1-4C6D-9179-B5FAD3A9FA08

Faunal list of the Lepidoptera of the provinces in Turkey, together with the recorded pterygots

Ahmet Ömer Koçak    Muhabbet Kemal

Abstract: Faunal list of the Lepidoptera of the provinces in Turkey, together with the recorded pterygots. Cesa News 97: 1-3.

In this short note, provincial lists of the Lepidoptera of Turkey published by the authors are reminded. Present numbers of the recorded species of the Lepidoptera and other pterygots for 81 provinces of Turkey are mentioned in a table. The reasons of the dissimilarity of the numbers among the provinces are explained. It is also apprised the planned future articles on this subject.

Kew words: Lepidoptera, Pterygota, fauna, Turkey.

1 About 1000 years ago, Yusuf Khass Hajib was an 11th-century Turkic philosopher from the city of Balasaghun, the capital of the Karakhanid Empire (Central Asia). He wrote the Kutadgu Bilig, first political work, giving important concepts of ideal state administration. Yusuf Khass Hajib died in 1085 in the city of Kashgar, and was buried there. Kutadgu Bilig means something like “The Wisdom which brings Happiness” or “The Wisdom that Conduces to Royal Glory or Fortune” (Dankoff,1983). This work is composed of sections, with 6645 lines. The 10. section “On the virtue and benefit of wisdom and intellect” (287-349). Reading the complete work is extremely recommended.


Seven years ago, the authors published the specific lists of the Lepidoptera of twenty provinces of Turkey (Koçak & Kemal, 2007a-v). These provinces together with their codes are as follows alphabetically: Adıyaman (02), Ağrı (04), Ankara (06), Ardahan (75), Artvin (08), Bayburt (69), Bitlis (13), Bursa (16), Elazığ (23), Erzincan (24), Erzurum (25), Hatay (31), Iğdır (76), İşıl (33), Kahramanmaraş (46), Kars (36), Konya (42), Malatya (44), Şırnak (73), and Tunceli (62).

In the present and the coming papers, the recorded pterygota species of the 81 provinces in Turkey will be evaluated faunistically under this title. Meanwhile, in the following (Table 1) these provinces and their species numbers known are summarized. According to the table, the best known groups in various provinces are marked with blue. Ankara is currently best studied province. On the other hand, the Pterygota fauna of some provinces in the western and northern Anatolia are poorly investigated (province numbers 03, 09, 10, 11, 14, 15, 17, 18, 19, 20, 22, 26, 28, 29, 37, 39, 40, 43, 45, 52, 53, 54, 55, 57, 59, 61, 64, 67, 68, 69, 70, 74, 75, 77, 78, 81). Similarly, some frontier provinces, as well as those in Southeast Turkey could not be studied properly, due to the unrest. These are: 12, 21, 30, 47, 63, 72, 73, 79. Nonetheless, the following provinces have been studying by the authors: 12, 13, 21, 30, 31, 49, 56, 65, 72, 73, and 76.

Table 1- Specific numbers of the Pterygota of the provinces in Turkey according to the Cesa info-system².

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>792</td>
<td>1663</td>
<td>28</td>
<td>151</td>
<td>212</td>
<td>55</td>
<td>142</td>
<td>516</td>
</tr>
<tr>
<td>02</td>
<td>136</td>
<td>463</td>
<td>29</td>
<td>323</td>
<td>394</td>
<td>56</td>
<td>575</td>
<td>426</td>
</tr>
<tr>
<td>03</td>
<td>279</td>
<td>404</td>
<td>30</td>
<td>762</td>
<td>637</td>
<td>37</td>
<td>67</td>
<td>333</td>
</tr>
<tr>
<td>04</td>
<td>485</td>
<td>424</td>
<td>31</td>
<td>570</td>
<td>1289</td>
<td>58</td>
<td>847</td>
<td>653</td>
</tr>
<tr>
<td>05</td>
<td>361</td>
<td>890</td>
<td>32</td>
<td>361</td>
<td>890</td>
<td>59</td>
<td>111</td>
<td>333</td>
</tr>
<tr>
<td>06</td>
<td>1495</td>
<td>2427</td>
<td>33</td>
<td>935</td>
<td>2092</td>
<td>60</td>
<td>478</td>
<td>559</td>
</tr>
<tr>
<td>07</td>
<td>617</td>
<td>2059</td>
<td>34</td>
<td>469</td>
<td>990</td>
<td>61</td>
<td>317</td>
<td>533</td>
</tr>
<tr>
<td>08</td>
<td>605</td>
<td>1095</td>
<td>35</td>
<td>371</td>
<td>1777</td>
<td>62</td>
<td>395</td>
<td>351</td>
</tr>
<tr>
<td>09</td>
<td>177</td>
<td>694</td>
<td>36</td>
<td>746</td>
<td>1063</td>
<td>63</td>
<td>276</td>
<td>629</td>
</tr>
<tr>
<td>10</td>
<td>206</td>
<td>580</td>
<td>37</td>
<td>175</td>
<td>501</td>
<td>64</td>
<td>62</td>
<td>154</td>
</tr>
<tr>
<td>11</td>
<td>150</td>
<td>544</td>
<td>38</td>
<td>468</td>
<td>1050</td>
<td>65</td>
<td>1251</td>
<td>1238</td>
</tr>
<tr>
<td>12</td>
<td>301</td>
<td>281</td>
<td>39</td>
<td>291</td>
<td>430</td>
<td>66</td>
<td>287</td>
<td>265</td>
</tr>
<tr>
<td>13</td>
<td>844</td>
<td>567</td>
<td>40</td>
<td>79</td>
<td>254</td>
<td>67</td>
<td>74</td>
<td>252</td>
</tr>
<tr>
<td>14</td>
<td>659</td>
<td>627</td>
<td>41</td>
<td>113</td>
<td>290</td>
<td>68</td>
<td>71</td>
<td>185</td>
</tr>
<tr>
<td>15</td>
<td>132</td>
<td>483</td>
<td>42</td>
<td>1298</td>
<td>1643</td>
<td>69</td>
<td>279</td>
<td>321</td>
</tr>
<tr>
<td>16</td>
<td>1310</td>
<td>159</td>
<td>43</td>
<td>166</td>
<td>432</td>
<td>70</td>
<td>250</td>
<td>349</td>
</tr>
<tr>
<td>17</td>
<td>371</td>
<td>527</td>
<td>44</td>
<td>453</td>
<td>532</td>
<td>71</td>
<td>510</td>
<td>154</td>
</tr>
<tr>
<td>18</td>
<td>351</td>
<td>367</td>
<td>45</td>
<td>251</td>
<td>613</td>
<td>72</td>
<td>80</td>
<td>78</td>
</tr>
<tr>
<td>19</td>
<td>126</td>
<td>347</td>
<td>46</td>
<td>1423</td>
<td>1047</td>
<td>73</td>
<td>407</td>
<td>373</td>
</tr>
<tr>
<td>20</td>
<td>139</td>
<td>556</td>
<td>47</td>
<td>282</td>
<td>433</td>
<td>74</td>
<td>86</td>
<td>112</td>
</tr>
<tr>
<td>21</td>
<td>349</td>
<td>612</td>
<td>48</td>
<td>243</td>
<td>1039</td>
<td>75</td>
<td>390</td>
<td>223</td>
</tr>
<tr>
<td>22</td>
<td>212</td>
<td>577</td>
<td>49</td>
<td>235</td>
<td>272</td>
<td>76</td>
<td>628</td>
<td>553</td>
</tr>
<tr>
<td>23</td>
<td>350</td>
<td>461</td>
<td>50</td>
<td>610</td>
<td>671</td>
<td>77</td>
<td>44</td>
<td>79</td>
</tr>
<tr>
<td>24</td>
<td>482</td>
<td>840</td>
<td>51</td>
<td>466</td>
<td>699</td>
<td>78</td>
<td>94</td>
<td>146</td>
</tr>
<tr>
<td>25</td>
<td>861</td>
<td>2558</td>
<td>52</td>
<td>143</td>
<td>228</td>
<td>79</td>
<td>9</td>
<td>62</td>
</tr>
<tr>
<td>26</td>
<td>143</td>
<td>597</td>
<td>53</td>
<td>262</td>
<td>428</td>
<td>80</td>
<td>190</td>
<td>402</td>
</tr>
<tr>
<td>27</td>
<td>193</td>
<td>562</td>
<td>54</td>
<td>45</td>
<td>269</td>
<td>81</td>
<td>155</td>
<td>85</td>
</tr>
</tbody>
</table>

² Cesa info-system: http://www.cesa-tr.org/Infos.htm. In our system, computerized worldwide information of the Cesa is currently composed of 176230 records. Digitalized and evaluated bibliography is composed of 12091 items (mostly published in the Cesa serials). Currently faunistical updating of some provinces are still ongoing.
References

Koçak, A.Ö. & M. Kemal, 2007a, Synonymical and distributional list of the species of Bursa Province (North West Turkey) (Lepidoptera). Priamus 11 (5): 81-111.


Koçak, A.Ö. & M. Kemal, 2007c, Synonymical and distributional list of the species of Kahramanmaraş Province (South Turkey) (Lepidoptera). Priamus 11 (7): 133-171.


Koçak, A.Ö. & M. Kemal, 2007m, Synonymical and distributional list of the species of Hatay Province (South Turkey) (Lepidoptera). Cent. ent. Stud., Misc. Pap. 120/121: 1-16.


Results of the two entomological trips in summer around Van Lake (East Turkey)

Muhabbet Kemal  Nigar Malati3  Malik Turdush4  Ahmet Ömer Koçak

**Abstract:** Results of the two entomological trips in summer around Van Lake (East Turkey). Cesa News 97: 4-12, 36 figs.

This paper deals with two short trips realized in 2014 in Van Lake Basin. On 30 July northern slopes of Artos Mt., (Van Province), on 31 July inside of Nemrut Caldera (Bitlis Province) were visited. A number of species of the following 9 orders are recorded and illustrated: Odonata, Orthoptera, Mantodea, Hemiptera, Planipennia, Lepidoptera, Diptera, Hymenoptera, and Coleoptera. Chlorochroa juniperina (Pentatomidae, Hemiptera) and Parnopes grandior (Chrysididae, Hymenoptera) are reported here for the first time. The genus Zygaena and Z. loti are also new record for the Nemrut Caldera.

**Key words:** Odonata, Orthoptera, Mantodea, Hemiptera, Planipennia, Lepidoptera, Diptera, Hymenoptera, Coleoptera, fauna Van, Bitlis, Artos, Nemrut, Turkey.

A very short and unplanned meeting of the four Cesa partners in Van city on 29 July 2014, became an opportunity to realize two entomological trips to Kavarsük on the northern slopes of Artos Mount (Gevas district, Van), and to Nemrut Caldera (Tatvan district, Bitlis). On 30 July, the team visited Kavarsük between the altitudes of 2010-2080m in the mountain steppe. Due to the season and the severe draught during the last two months in the province, almost all the herbaceous plants dried on the mountain slopes, with the exceptions of some xerophyts like Echinops, Cirsium, Inula, Eryngium, Scabiosa, Knautia etc. On 31 July, during midday, two places inside of the Nemrut Caldera, namely around vapour chimney (2337m) and warmlake (2270m) were studied.

For identification of all the specimens collected or photographed reference collection and the photography archive of the Cesa were used.5

Brief results of the observation and collecting activities are given below:

**Insects in the vicinity of Kavarsük, 2010-2080m alt., on 30 July 2014**

Between 10-11.00, at the altitude 2010m, the first place visited contains small muddy patches, where the males of some lycaenids, pierids, and hesperiids were observed. These are as follows: Butterflies: Lycaena virgaureae (1♀) (Fig.1), Polyommatus vanensis (5♂), P. pseudactis (1♂) (Fig.2), P. corydonius ssp. caucasicus (1♂) (Fig.3), P. daphnis (1♂) (Fig.4), P. demavendi, P. icarus, Plebejus argus, P. alcedo (1♂) (Lycaenidae); Pieris ergane (1♂) (Fig.5), Leptidea duponcheli (1♂) (Pieridae); Carcharodus orientalis (Hesperiidae). As to the other insects, specimens of the following families were collected by the authors: Megachilidae, Vespidae, Ammophila sp. (Sphecidae)(Fig.6) (Hymenoptera); Tephritidae (Diptera); Hemiptera: Miridae; Gerris costae (Gerridae) (Fig.7); Pentatomidae: Carpcoris fuscispinus (Fig.8).

5 Student 5th year, Medical University of Warsaw, Bachelor of Medicine, Warsaw, Poland
6 Computer Engineer, graduated Information Technology, University of western Sydney, Australia.
7 http://www.cesa-tr.org/Infos.htm
Fig. 1 – *Lycaena virgaureae* (*Lycaenidae*). A female, feeding on the flower of *Eryngium* (*Apiaceae*). Photo M.Kemal (Cesa)

Fig. 2 – *Polyommatus pseudactis* (*Lycaenidae*). A male, resting on the stone. Photo M.Kemal (Cesa)

Fig. 3 – *Polyommatus corydonius ssp.caucasicus* (*Lycaenidae*). A male, feeding on the flower of *Scabiosa* (*Dipsacaceae*). Photo M.Kemal (Cesa)

Fig. 4 – *Polyommatus daphnis* (*Lycaenidae*). A male, resting on a plant. Photo M.Kemal (Cesa)

Fig. 5 – *Pieris ergane* (*Pieridae*). Group of males, sipping mineral waters on a muddy place. Photo M.Kemal (Cesa)

Fig. 6 – *Ammophila sp.* (*Sphecidae*). Photo M. Turdush (Cesa)
Between 11-13.00, at the altitude 2080m, the mountain steppe with sporadic Crataegus trees at the upper heights of Kavarsük, an abandoned small village (Fig.9). Following species were observed and collected. Lepidoptera, Lycaenidae: Lycaena virgaureae, Polyommatus antidoras (1♂) (Fig.10), P. aedon (both sexes during courtship), P. mithridates (1♀) (Fig.11), P. thersites (1♂), P. demavendi (3♀), Plebejus carmon (1♂), P. argus (3♀), P. loewi; Pieridae: Pieris ergane (1♂), Leptidea duponcheli (1♂); Satyridae: Coenonympha pamphilus (2♂), Arethusana arenus (2♂) (Fig.12), Chazara briseis (Fig.13); Hesperiidae: Spialia phlomidis (Fig.14). Pyralidae: Nephopterix alpigenella (2♂); Zygaenidae: Zygaena carniolica (1♂). Diptera: Bombyliidae: Amictus sp. (2♂), Asilidae (2 species), Tachinidae (1 species). Hymenoptera: Braconidae (1 species), Ceramius caucasicus (Vespidae, Masarinae) (1♂), Pompiliidae (1 species), Megachilidae (1 species); Coleoptera: Chrysomelidae (1 species), Meloidae (3 species). Planipennia: Myrmeloonidae (3 species) (Figs.15-17). Hemiptera: Miridae (1 species). Homoptera: Issidae (1 species). Orthoptera: Tetrigonidae, a nymph; Coleoptera: Meloidae: Mylabrini species (Fig.18), Chrysomelidae: (Fig.19).
Fig. 10 – *Polyommatus antidolus* (*Lycaenidae*). A male, sitting on a plant. Photo M. Kemal (Cesa)

Fig. 11 – *Polyommatus mithridates* (*Lycaenidae*). A male, feeding on the flower of *Eryngium* (*Apiaceae*). Photo M. Kemal (Cesa)

Fig. 12 – *Arethusana arethusa* (*Satyridae*). A male, sitting on a plant. Photo M. Kemal (Cesa)

Fig. 13 – *Chazara briseis* (*Satyridae*). A male, sitting on the earth. Photo M. Turdush (Cesa)

Fig. 14 – *Spialia phlomidis* (*Hesperiidae*). A male, sitting on a plant. Photo M. Turdush (Cesa)

Fig. 15 – An ant-lion species-1 (*Myrmeleonidae*) at rest. Photo M. Kemal (Cesa)
Fig. 16 – An ant-lion species-2 (*Myrmeleonidae*) at rest. Photo M. Kemal (Cesa)

Fig. 17 – An ant-lion species-3 (*Myrmeleonidae*) at rest. Photo M. Kemal (Cesa)

Fig. 18 – *Mylabrini* sp. (*Meloidae*) feeding on *Scabiosa* flower (*Dipsacaceae*). Photo M. Kemal (Cesa)

Fig. 19 – A leaf beetle species (*Chrysomelidae*) on *Inula* flower (*Asteraceae*). Photo M. Kemal (Cesa)

Insects inside the Caldera of Nemrut Volcano, 2270-2337 m alt., on 31 July 2014

Fig. 20 – One of the habitats in the Nemrut Caldera, Tatvan district, Bitlis Province. M. Kemal (Cesa)
By following our dear Muka'ddas's foot traces,7 we visited this time two places of the Caldera, loc. 1 - “vapour chimney” (2337m), and loc. 2- “warmlake” (2270m). Members of nine orders (Odonata, Orthoptera, Mantodea, Hemiptera, Planipennia, Lepidoptera, Diptera, Hymenoptera, Coleoptera) were observed or collected. At the same time, they belong to 26 families. List of the recorded taxa and illustrations in nature are given below:

**Odonata**
Libellulidae: Orthetrum sp.1 Observed at loc.2. Orthetrum brunneum 1 ex at loc.2 (Fig.21).

**Orthoptera**
Acrididae: Oedaleus decorus. Observed at loc.2 & 1♀ at loc.2 (Fig.22). Oedipoda coerulescens. Observed at loc.2. Sphingonotus sp. Observed at loc.2 (Fig.23). Calliptamus sp. 1♂ at loc.2.
Tettigoniidae: Platycleis sp. (nymph). 1♀ at loc.2

**Mantodea**
Mantidae: Bolivaria brachyptera. Observed at loc.2 (Figs. 24,25).

**Hemiptera**
Pentatomidae: Carpocoris coreanus. Observed at loc.2, on Verbascum and Knautia & 6 ex. at loc.2 (Figs. 26-28). Chlorochroa juniperina. 1♂, leg. N. Malati at loc.2 (Fig.29). This species is green coloured, when alive; its proboscis reaches upto 1. abdominal sternit. In the collecting site, Juniperus is widely distributed. No Pinus species is recorded in the Caldera. This bug is new record to Bitlis Province, and Van Lake Basin!
Reduviidae: Observed at loc.2 (Fig.30).
Miridae: 1 ex captured by a thomisid at loc.2.

**Planipennia**
Myrmeleonidae: 2 spp. 2♂ at loc.2.

**Lepidoptera**
Pieridae: Colias crocea. Observed mostly old specimens at loc.2 during feeding on Knautia & 3♂ 2♀ at loc.2 (Fig.31).
Satyridae: Hyponephele lycaon. 1♀ 1♂ at loc.1. Satyrus favonius ssp. favonius. 1♂ 1♀ at loc.2. Satyrus iranicus. 1♀ at loc.2.
Lycaenidae: Lycaena tityrus. Observed at loc.2 & 1♂ 1♀ at loc.2 (Fig.32). Lycaena phlaeas. Observed at loc.2 & 1♀ at loc.2 (Fig.33). Lycaena alciphron. 1♂ at loc.1 & 1♀ at loc.2. Plebejus alcedo. 1♂ at loc.1. Plebejus loewii. 1♀ at loc.1 & 6♀ 1♂ at loc.2. Polyommatus daphnis. 1♂ at loc.2. Polyommatus pseudactis 2♂ at loc.1. Polyommatus demavendi 1♂ at loc.2. Polyommatus agestis. 1♂ at loc.2.
Hesperiidae: Hesperia comma. Observed at loc.2 (Fig.34).
Brachodidae: Brachodes sp. 1♂ at loc.2.
Zygaenidae: Zygaena loti, ssp. 1♂ at loc.2. A very pale specimen. New to the fauna of Nemrut Volcano! Besides, the genus Zygaena has not been reported from Nemrut Caldera so far.

**Diptera**
Bombyliidae: Hemipenthes velutinus. 1♂ at loc.2
Stratiomyidae: Observed at loc.2, captured by a thomisid (Fig.35).
Syrphidae: Eristalis arbustorum. 1♀ at loc.2. Syrphus sp. 1 ex. at loc.2.

**Hymenoptera**
Megachilidae: Anthidium sp. 1 ex at loc.2. Megachile sp. 1 ex at loc.2.

---

7 Mukaddas Mijit, accompanied with us during an excursion to Nemrut Caldera in July 2011. She is currently PhD student of Cultures et sociétés du pass et du présent in Ethnomusicologie, Université Paris, Paris, France.
Sphecidae: Sphex aff. funerarius. 1♂ 1♀ at loc.2
Apidae Bombus sp.1 1 ex at loc.2. Bombus sp.2 1 ex at loc.2.
Vespidae: Polistes sp. 2 ex at loc.2.
Scoliidae: Scolia sp. 1 ex at loc.2
Melittidae: Dasypoda sp. 1 ex at loc.2
Chrysididae: Parnopes grandior. 1♀ at loc.2. New record for Bitlis Province, and Van Lake Basin! (Fig.36)

Coleoptera
Coccinellidae: Coccinella septempunctata. Observed at loc.1.
Meloidae: Mylabris sp. 1♂ at loc.2

Fig. 21 – Orthetrum burnneum (Libellulidae). Photo M. Turdush (Cesa)

Fig. 22 – Oedaleus decorus (Acrididae). Photo M. Kemal (Cesa)

Fig. 23 – Sphingonotus sp. (Acrididae). Photo M. Kemal (Cesa)

Fig. 24 – Bolivaria brachyptera (Mantidae). Photo M. Kemal (Cesa)

Fig. 25 – Bolivaria brachyptera (Mantidae). Photo M. Kemal (Cesa)

Fig. 26 – Carpocoris coreanus (Pentatomidae) on the flowers of Verbascum (Scrophulariaceae). Photo M. Kemal (Cesa)
Fig. 27 – Carpocoris coreanus (Pentatomidae) on the flowers of Knautia (Dipsacaceae). Photo M. Kemal (Cesa)

Fig. 28 – Carpocoris coreanus (Pentatomidae) on the flowers of Allium (Liliaceae). Photo M. Kemal (Cesa)

Fig. 29 – Chlorochroa juniperina ♂ (Pentatomidae). Photo M. Kemal (Cesa)

Fig. 30 – Rhynocoris sp. (Reduviidae) on the flowers of Vesbascum. Photo M. Kemal (Cesa)

Fig. 31 – Colias crocea (Pieridae). A worn specimen during feeding on the flowers of Scabiosa (Dipsacaceae). Photo M. Kemal (Cesa)

Fig. 32 – Lycaena tityrus (Lycaenidae), a male of the second generation at rest. Photo M. Kemal (Cesa)
Fig. 33 – *Lycaena phlaeas* (Lycaenidae), a male of the second generation at rest. Photo M. Kemal (Cesa)

Fig. 34 – *Hesperia comma* (Hesperiidae), a female specimen at rest. Photo M. Kemal (Cesa)

Fig. 35 – A stratiomid fly captured by a thomisid spider. Photo M. Kemal (Cesa)

Fig. 36 – *Parnopes grandior* (*Chrysididae*) on *Scabiosa* flower (*Dipsacaceae*). Photo M. Kemal (Cesa)

Authors’ addresses

**Muhabbet Kemal**
Yüzüncü Yıl University, Faculty of Science, Department of Biology, Van, Turkey
e-mail – muhabbet_kemal@yahoo.com.tr

**Nigar Malati**
Multrågatan 23, Vaellingby 16254, Stockholm, Sweden
e-mail – nigar129@hotmail.com

**Malik Turdush**
5/19-21 Hill St. Wentworthville NSW Australia 2145
e-mail - slash502e@hotmail.com

**Ahmet Ömer Koçak**
Yüzüncü Yıl University, Faculty of Science, Department of Biology, Van, Turkey
e-mail – cesa_tr@yahoo.com.tr
Rediscovering of *Charaxes jasius jasius* (Linnaeus, 1767) (Lepidoptera: Nymphalidae) in Lebanon

Jaroslaw Bury

New data are presented concerning the rare nymphalid butterfly *Charaxes jasius jasius* (Linnaeus, 1767) in southern Lebanon. The current taxonomic status, biology, ecology, and distribution in the Middle East are reviewed.

Key words: Lepidoptera, Nymphalidae, *Charaxes jasius jasius*, Lebanon, new localities, rediscovery, faunal studies

Introduction

The genus *Charaxes* Ochsenheimer, 1816, is a very numerous group of closely related species that has long been a source of taxonomic problems. State-of-the-art genetic research has helped identify the kinship relations for most of the species, and the genus is currently divided into five subgenera. The subgenus *Charaxes* Ochsenheimer, 1816, comprises eleven species groups, including a jasius group, which, apart from *Charaxes jasius* (Linnaeus, 1767), also includes *Charaxes legeri* Plantrou, 1977, *Charaxes castor* (Cramer, 1775), *Charaxes brutus* (Cramer, 1779), *Charaxes lucretius* (Cramer, 1777), *Charaxes eudoxus* (Drury, 1782), *Charaxes druceanus* Butler, 1869, *Charaxes ansorgyi* Rothschild, 1897, *Charaxes richelmani* Röber, 1930, *Charaxes pollux* (Cramer, 1775), *Charaxes lactetinctus* Karsch, 1892, and *Charaxes ducarmei* (Plantrou, 1982) (Aduse-Poku et al. 2009).

At the same time, it has been determined that the subgeneric taxa forming part of the taxon *Charaxes jasius* (Linnaeus, 1767) do not represent a monophyletic group, with the subspecies *Charaxes jasius jasius* (Linnaeus, 1767) from the Mediterranean region in particular exhibiting considerable genetic differences when compared with the subspecies *Charaxes jasius epijasius* Reiche, [1850] and *Charaxes jasius saturnus* (Butler, 1865) from Sub-Saharan Africa (Aduse-Poku et al. 2009). A separate status for these taxa was postulated previously by a number of researchers and taxonomists (Larsen 2005).

*Charaxes jasius jasius* (Linnaeus, 1767) is mostly distributed along the Mediterranean coast. In North Africa, the butterfly can be found in Morocco, Algeria and Tunisia, but it has not been reported from the Mediterranean coast of Libya and Egypt (Larsen 1974, Tolman, Lewington 1997, Tarrier, Delacre 2008, Kemal, Koçak 2011).

In Europe, *Charaxes jasius jasius* (Linnaeus, 1767) is known chiefly from coastal areas in Portugal, Spain, Gibraltar, France, Italy, Croatia, Bosnia & Herzegovina, Serbia, Montenegro, Albania, and Greece. It has also been reported from numerous Mediterranean islands, including the Baleares, Corsica, Sardinia, Sicily, Corfu, Crete, Samos, Icaria, Euboea, Chios and Rhodes, as well as from Cyprus (Perez de Gregorio 1975, Wagner-Rollinger 1978, Aberlenc 1979, Teobaldelli

---

 Received on 24 July, 2014; accepted on 24 July, 2014


The aim of this paper is to review data on the occurrence of Charaxes jasius jasius (Linnaeus, 1767) and provide up-to-date information on the distribution of this species in Lebanon.

**Biology**

Charaxes jasius jasius (Linnaeus, 1767) reaches a wing span of 65 to 85 mm. The hind wings have two pairs of long tails. The butterflies are easy to identify owing to their characteristic habitus. There is poor sexual dimorphism, with females usually slightly larger than males.

Two generations can usually be seen yearly, appearing from May to early July and from mid-August to mid-October. Under favourable circumstances, a third, incomplete, generation may appear in the south of Spain and in Africa in December, with imagines usually larger than those of the second generation. Young caterpillars are the overwintering stage (Verdugo-Paez 1987, Tarrier, Delacre 2008).

The main host plant of the caterpillars is Arbutus unedo L. (Tolman, Lewington 1997). In the eastern part of the Mediterranean basin (e.g. Cyprus), the caterpillars may also be frequently seen feeding on Arbutus andrachne L. (Markis 2003). Other species identified as host plants in the literature include Osyris quadripartita Salzmann ex Decaisne in the southern part of the Iberian Peninsula and on the Baleares (Fernandez-Martinez 2000), Nicotiana glauca Graham on Samos and Cyprus (Markis 2003), Camellia sinensis (L.) Kuntze in North Africa (Tolman, Lewington 1997), and even Citrus paradisi Macfad. and Citrus sinensis (L.) Osbeck. in Italy (Longo et al. 2000). Caterpillars are also sporadically seen on other plants, such as Annona cherimola (Miller) (Sariot 2003), Laurus nobilis L. (Nel 1979, Stefanescu 1995), and Prunus persica (L.) Batsch (Danner 2001).

**Distribution in Middle East**

Charaxes jasius jasius (Linnaeus, 1767) is widely distributed across the coastal zone of the Mediterranean Sea. While it has been reported from almost all countries in the eastern part of the region, e.g. southern Turkey, Jordan, Israel, Cyprus, and Lebanon, contemporary data are only available for some of them, mostly Turkey, Israel, Jordan, and Cyprus (Koçak, Kemal 2009, Katbeh-Bader et al. 2003, Markis 2003, Al-Quran 2009, Benyamini 2009, 2010).

Of the countries bordering on Lebanon, the distribution of Charaxes jasius jasius (Linnaeus, 1767) is best documented in Israel, where the species occurs in two zoogeographical zones in the north and centre of the country.

One area is an area comprising Mt. Meron (Gebel Germak, Jabal al-Jarmaq) and the mountain valleys surrounding it at altitudes between 600 m and 1200 m above sea level. Charaxes jasius jasius (Linnaeus, 1677) has been reported from a few localities situated just along the border with Lebanon, e.g. in Iqrit (Iqrith, Iquiret, Akrith), 570 m ASL, 33 04’ 31.55”N; 35 16’ 30.75”E, approximately 2.5–3 km south of the border, and in Mattat (Dayr al-Qassi’, Deir el-Qasi), 800 m ASL, 33 02’ 28.15”N; 35 21’ 18.04”E, approximately 1.5 km from the border (Benyamini pers.comm.).

Typical butterfly species in this area include Callophrys rubi rubi (Linnaeus, 1758), Celastrina argiolus paraleuca (Röber, 1897), Cyaniris bellis antiochena (Lederer, 1861), Chazara persephone transiens (Zerny, 1932), and Melitaea collina collina Lederer, 1861.

The other zone, called the main Mediterranean zone, encompasses mountain ranges and a coastal lowland extending from the Israeli-Lebanese border in the north to Jerusalem and Gaza in...
the south. Typical butterfly species in this zone are *Gonepteryx cleopatra taurica* (Staudinger, 1881) and *Melanargia titea titania* Calbera, 1891.

Both these zones, especially an area comprising the upper, mountainous part of Israel, constitute the main habitat of *Charaxes jasius jasius* (Linnaeus, 1767) on the eastern Mediterranean coast. *Arbutus unedo* L. is the only natural host plant of the species in Israel; caterpillars kept for breeding also accept other species of this plant genus. It is fairly common and abundant in this area (Benyamini 1983, 2009, 2010, pers.comm.).

*Charaxes jasius jasius* (Linnaeus, 1767) is also known from the Golan Heights, a disputed territory that used to be part of Syria until 1967 and has been administered by Israel since 1967. Within the current borders of the Golan Heights, the butterfly has been reported since 2000 from the vicinity of Mt. Dov (Gebel Rus, Har Dov), a hill located approx. 1200 m ASL, 33° 17' 07.46"N, 35° 41' 24.76"E, very close to the present border with Lebanon, within the Shebaa Farms (Mazārī Sībā, Havot Sheba') (Benyamini pers.comm.).

![Fig. 1.](image-url) Distribution of *Charaxes jasius jasius* (Linnaeus, 1767) in Lebanon ● – literature data, ● – new data.

**Methods**

The butterflies were followed up directly in Lebanon in 2003-2004. They were watched live in their natural environment or captured with a standard sweeping net and preserved according to standard principles of Macrolepidoptera preservation. The material is in the author’s private collections.

Given next to the locality name are: the name of the region, UTM (Universal Transverse of Mercator) co-ordinates (10x10 km grid) and geographical co-ordinates in DMS and DMF formats.

**Results**

*Lebanon, Southern Lebanon, Naqoura (An Nāqūrah, Enn Nāqoura), [YB06], 33° 07' 27.44"N, 35° 08' 13.71"E, 33.124290, 35.137141 – 2 exx., 20 X 2004, leg. & det. J. Bury and X 2004 – watched a few individuals with the wings very much damaged.*
The new locality (Fig. 1) is located within a coastal band, in a built-up rural area with sparse orchard and house garden type of vegetation. The built-up areas are surrounded by elevations and hills covered with a maquis shrubland turning into garrigue shrubland. The distance from the shore line is approx. 200 m.

**Discussion**

In Lebanon, *Charaxes jasius jasius* (Linnaeus, 1767) has previously been known only from a handful of historical sites. It was recorded from the environs of Aaraya [YC44] in July 1927, from Beirut [YC35] in September 1934, and from the area around Beit Méry [YC45] in April 1934 (Ellison, Wiltshire 1939). The presence of this species in Lebanon was also mentioned by a German entomologist travelling in Lebanon (Roell 1962) (Fig. 1).

All reports to date have been confined to the coastal zone, also known as the lower Mediterranean zone (Larsen 1974). This zone encompasses areas located in the altitude range between the sea level and approx. 500 m ASL and has characteristic vegetation, with *Pinus helepensis* Mill., *Arbutus unedo* L., *Pistacia lentiscus* L., *Myrtus communis* L., *Clematis cirrhosa* L., *Asparagus acutifolius* L., *Phlomis viscosa* Poiret in Lam., *Scilla autumnalis* L., *Iris palaestina* (Baker) Boiss., and *Colchicum stevenii* Kunth.

A characteristic secondary coastal plant community is the maquis shrubland (Fig. 2.), composed mainly of low trees and shrubs of the genus *Quercus* L., *Terebinthus* Mill., *Ceratonia* L., *Laurus* L. as well as vines and aromatic herbs - *Smilax* L., *Lonicera* L., *Asparagus* L., *Clematis* L. and many others, (Fig. 2.). Characteristic butterfly species in this zone are *Gonepteryx cleopatra taurica* (Staudinger, 1881), *Melanargia titea titania* Calbera, 1891, and *Ypthima asterope asterope* (Klug, 1802) (Larsen 1974).

Regrettably, the zone has been subject to considerable transformation in the form of urbanisation, degradation due to excessive pasturing, clearing for charcoal production, and transformation to arable land with dominant plantations of citrus and banana plants. It was probably this intensified anthropogenic activity along the Mediterranean coast that was the reason...
behind the failure of the well-known Danish entomologist Torben B. Larsen to confirm the occurrence of this species in Lebanon despite an extensive search between 1970 and 1974 (Larsen 1974). No new records of *Charaxes jasius jasius* (Linnaeus, 1767) in Lebanon have been available up to now (Larsen 1986, pers. comm.).

The new reports of *Charaxes jasius jasius* (Linnaeus, 1767) in the south of Lebanon have closed an over 40-year hiatus in recording the species in Lebanon. The species has been found in the extreme south of the country, near the Israeli border. Paradoxically, this most economically neglected part of the Lebanese coast has probably preserved enough natural habitats to sustain a local population of *Charaxes jasius jasius* (Linnaeus, 1767). It is also possible that the caterpillars take advantage of domesticated plants and alien decorative plants introduced to this area by man.

Another possible explanation for the finding of *Charaxes jasius jasius* (Linnaeus, 1767) in southern Lebanon is the migration of imagines from neighbouring Israel, where legal protection regulations have resulted in the presence of a wide diversity of natural habitats where the caterpillars have easy access to their main host plant *Arbutus unedo* L.

The geopolitical situation makes insect studies in Lebanon difficult. However, every new study in this area brings a number of new discoveries, one example being the observations made by the present author about Coleoptera: Cerambycidae of southern Lebanon (Sama et al. 2010).

**Acknowledgements**

Thanks are due to Torben B. Larsen who have contributed to the development of this article.

**References**


17


STRESZCZENIE
[ Ponowne odkrycie Charaxes jasius jasius (Linnaeus, 1767) (Lepidoptera: Nymphalidae) w Libanie.] Charaxes jasius jasius (Linnaeus, 1767) zasiedla niemal całe wybrzeże Morza Śródziemnego. W wschodniej części rejonu swego występowania wykazany jest z wielu krajów, jednak nowe dane dotyczą głównie Turcji, Cypru, Jordanii i Izraela. Od ponad 40 lat gatunek ten nie był wykazywany w Libanie. W pracy przedstawiono nowe i niepublikowane dotychczas dane o występowaniu Charaxes jasius jasius (Linnaeus, 1767) w Libanie. Praca podaje również krótko obecny status taksonomiczny, biologię, ekologię i rozmieszczenie Charaxes jasius jasius (Linnaeus, 1767) w Libanie oraz w krajach z nim sąsiadujących, głównie w Izraelu, na terytorium którego zlokalizowana jest najliczniejsza populacja tego gatunku na Bliskim Wschodzie.
C o n t e n t s :  Koçak,A.Ö. & M.Kemal, Faunal list of the Lepidoptera of the provinces in Turkey, together with the recorded pterygots, P. 1; Kemal,M. Malati,N., Turdush,M. & A.Ö.Koçak, Results of the two entomological trips in summer around Van Lake (East Turkey), p. 4; Bury, J. Rediscovering of Charaxes jasius jasius (Linnaeus, 1767) (Lepidoptera: Nymphalidae) in Lebanon, p. 13; - Editorial, p. 20.

Centre for Entomological Studies Ankara

(A scientific Consortium)
(co-operation of research workers for pure-scientific, not commercial purpose)

Web Page of the Cesa: http://www.cesa-tr.org/

Scientific Serials; Priamus & Supplement (ISSN 1015-8243), Miscellaneous Papers (ISSN 1015-8235), Memoirs (ISSN-8227), DVD Films, Iconographia Insectorum Cesa Publications on African Lepidoptera (series), Cesa News [online], Cesa Books Owners / Sahipleri - Editors / Yayınıcılar: Prof. Dr. Ahmet Ömer Koçak (c/o Yüzüncü Yıl University, Turkey) - Editor Assistant: Asst. Prof. Dr. Muhabbet Kemal Koçak (c/o Yüzüncü Yıl University, Turkey).

Editorial Board of all Scientific Serials / Bütün Bilimsel Yayınların Yayın Kurulu: Insecta, taxonomy, nomenclature, ecology, faunistics: Prof. Dr. Ahmet Ömer Koçak (Yüzüncü Yıl Universities, Turkey), Asst. Prof. Dr. Muhabbet Kemal Koçak (Yüzüncü Yıl University, Turkey), Assoc. Prof. Dr. Selma Seven (Gazi University, Turkey); Homoptera: Dr. Emine Demir (Turkey). Coleoptera / Chrysomelidae: Assoc. Prof. M.S.Mohammedsaid (Malaysia). - Plant taxonomy, flora and vegetation: Asst. Prof. Dr. Fevzi Özgökçe, Asst. Prof. Dr. Murat Unal (Yüzüncü Yıl University, Van, Turkey).

Correspondences should be addressed to: Prof. Dr. Ahmet Ömer Koçak, c/o Yüzüncü Yıl University, Fen Fakültesi, Biyoloji Bölümü, Kampus, Van / Turkey. - e-mail: cesa_tr@yahoo.com.tr

All serials are recorded regularly by the Zoological Record, Thomson Reuters, Enterprise House, Innovation Way, Heslington, York, YO10 5NQ, United Kingdom

ts-emea-york.dcsadmins@thomson.com