The Noctuidae fauna of Turkmenistan (Lepidoptera)

(concluded from *Phegea* **26**, p. 40)

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272. ***Agyrospila succinea*** Esper, 1798 (middle Asian): Ai-Dere, Syunt (K: VI).

273. ***Hadjina beata*** Staudinger, 1895 (endemic of Turkmenistan): Repetek (Ts: 12.V).

274. ***Sesamia cretica*** Lederer, 1857 (f. *striata* Staudinger, 1888) (Mediterranean): Repetek (Ts); Sumbar (K); Deinau (D: V); Bairam-Ali (B: 21.VI); Badkhyz (Sv); Bugdaili (D: 12.V).

275. ***Stenodrina paupera*** Christoph, 1885 (Iran-Turanian): Ai-Dere (K: 3.VI).

276. ***Hoplodrina alsines*** Brahm, 1791 (Transpalaearctic): Bairam-Ali (B: 28.V).

277. ***Hoplodrina levis*** Staudinger, 1888 (middle Asian): Repetek (Ts).

278. ***Hoplodrina ambigua*** [Denis & Schiffermüller], 1775 (Mediterranean): Kara-Kala (K: 9.V–11.VII); Lambe (D: VI); Tshilmamed-Kum (S: 18–20.VIII); Bugdaili (D: 23.V).

279. ***Spodoptera exigua*** Hübner, 1808 (cosmopolitan): Kara-Kala (K: 21.IV–22.VIII); Kara-Kala m. d., Ai-Dere, Iol-Dere, Syunt (K: VI); Badkhyz (P: 10–21.IV; 11.VI–7.VII; Sv); Yaskhan (RV: 29.IV); Repetek (Ts: X, XI; Kos: 22– 25.V, 5.VI); Nebit-Dagh (H: IV, VII, IX; Tr: VI); Dardja (H: V); Deinau, Lambe (D: IV–VI); Tschardzhou (S: 29.VII–18.VIII); Bairam-Ali (B).

*280. ***Spodoptera littoralis*** Boisduval, 1833 (tropical, subtropical): Imam-Baba (Dan: 17.X).

281. ***Caradrina albina*** Eversmann, 1848 (Transpalaearctic): Kara-Kala (K: 12.V–16.VI); Syunt (K); Repetek (Ts: IX, X); Badkhyz (P: 15.IV–12.V, 3.X); Yaskhan (RV: 27.IV–4.V); Nebit-Dag (H: 15.IV); Deinau (D: V).

*282. ***Caradrina albersi*** Warren, 1936 (middle Asian): Imam-Baba (Dan: 21.X).

283. ***Caradrina aspersa*** Rambur, 1839 (Mediterranean): Ashkhabad (Pt: 18.VI).

284. ***Caradrina brandti*** Boursin, 1939 (middle Asian): Ashkhabad (Pt: 18.VIII).

285. ***Caradrina clavipalpis*** Scopoli, 1763 (Transpalaearctic): Kara-Kala m. d. (K: 19.IV–27.VI); Syunt, Ai-Dere (K); Yaskhan (RV: 27.IV–4.V); Lambe (D: IV,V).

286. ***Caradrina personata*** Kuznetzov, 1958 (endemic of Kopet-Dagh): Ai-Dere (K: 28.V).

287. ***Caradrina vicina*** Staudinger, 1870 (Iran-Turanian): Repetek (Ts); Kara-Kala m. d. (K: 28.VII–24.VIII); Badkhyz (P: 8–12.IX); Nebit-Dagh (H: 1.VI); Tshilmamed-Kum (H: 1.X); Kizyl-Takyr (H: 14.X); Yaskhan (RV); Uzun-Su (D: 3.X); Tersakan (D: 8.X); Danata (D: 26–29.IX); Ashkhabad (Pr: 8.VIII–9.IX).

287a. ***Caradrina clara*** Schawerda, 1928 (Iran-Turanian): Repetek (Ts: IX).

*288. ***Caradrina expansa*** Alphéraky, 1897 (Iran-Turanian): Repetek (Ts).

289. ***Caradrina prospera*** Kuznetzov, 1958 (endemic of Turkmenistan): Kara-Kala m. d. (K: 24.VIII); Badkhyz (P: 20–26.IX).

290. ***Caradrina fergana*** Staudinger, 1892 (=*eucrinospila* Boursin, 1936) (middle Asian): Repetek (Ts: IX, X; Pt: 12.II); Badkhyz (P: 22.IX).

291. ([7]) ***Caradrina pertinax*** Staudinger, 1879 (Iran-Turanian): Kara-Kala, Kara-Kala m. d. (K: VI).Nebit-Dagh (Ts); Ashkhabad (Tr).

292. ***Caradrina turatii*** Boursin, 1936 (mountain middle Asian): Ashkhabad (Tr).

[7] We don't include here: *Caradrina monticola* Kuznetzov, 1958 (Kuznetzov, 1958).

293. ***Chilodes distracta*** Eversmann, 1848 (east-Mediterranean): Repetek (Ts: 26.IV); Yaskhan (RV: 27.IV–4.V).

294. ***Rhabinopteryx turanica*** Erschoff, 1874 (Iran-Turanian): Repetek (Ts: 25.III, 14–25.IV); Lambe (D; 24.IV); Sumbar (K: 2.VI).

295. ***Aegle subflava*** Erschoff, 1874 (middle Asian): Badkhyz (P: 25–28.IV; Sv); Repetek (Ts: IV); Lambe (D: IV, V); Iolotan (V: 12.X); Kara-Kala, Kara-Kala m. d. (K: 21.IV–19.V).

296. ***Paraegle ochraea*** Erschoff, 1874 (middle Asian): Badkhyz (P: 20.IV; Sv); Yaskhan (RV: 27.IV–4.V); Repetek (Ts: IV); Nebit-Dagh (H: 15.IV–10.VI); Ai-Dere (K: 22.VIII); Dardja (D: V); Tshilmamed-Kum (H: IV).

297. ***Paraegle tesselata*** Gerasimov, 1931 (middle Asian): Badkhyz (Sv); Kara-Kala m. d. (K: 16–24.VI).

298. ***Haemerosia renalis*** Hübner, [1818] (Mediterranean): Sumbar (K: 9.VII).

*299. *Haemerosia vassilininei* Bang-Haas, 1912 (east-Mediterranean): Kara-Kala (Ts).

Subfamily Heliothinae

300. ***Helicoverpa armigera*** Hübner, 1808 (cosmopolitan): Kara-Kala (K: 31.V–12.VII); Badkhyz (P: 2.II–12.VI); Yaskhan (RV: 27.IV–4.V); Nebit-Dagh (H: 1.VI, IX); Deinau (D: V); Tschardzhou (S: 20.VIII); Tshuli (Kaz: 17–23.IX); Krasnovodsk (Kaz: 22.V).

301. ***Heliothis viriplaca*** Hufnagel, 1766 (Transpalaearctic): Kara-Kala (K: 21.VII); Yaskhan (RV: 30.IV); Lambe (D: VI).

302. ***Heliothis peltigera*** [Denis & Schiffermüller], 1775 (tropical, subtropical): Kara-Kala, Kara-kala m. d., Ai-Dere, Syunt (K: 26.IV–12.VII); Badkhyz (P: 14.X; Sv); Repetek (Ts); Nebit-Dagh (H: IV, V); Lambe (D: V).

303. ***Heliothis nubigera*** Herrich-Schäffer, 1851 (tropical, subtropical): Kara-Kala (K: 25.V–28.VI); Badkhyz (P: 12.IV, 12.VI, 13.IX); Yaskhan (RV: 27.IV–4.V); Repetek (Ts: IV, IX–XI; Z: 5–10.III); Deinau, Lambe (D: V, VI); Tschardzhou (S: 8.V); Nebit-Dagh (H: 5.VI, VII); Uzun-Su (D: 15.VI).

304. ***Protoschinia scutosa*** [Denis & Schiffermüller], 1775 (holarctic): Kara-Kala, Kara-Kala m. d. (K: IV); Syunt (K: 25.VII); Badkhyz (P: 13.VI; Sv); Nebit-Dagh (H: VI, VII, IX).

305. ***Rhodocleptria incarnata*** Freyer, 1838 (east-Mediterranean): Kara-Kala m. d. (K: 19.IV–10.V); Badkhyz (P: 20–22.IV); Lambe (D: 8.V).

306. ***Rhodocleptria feildi*** Erschoff, 1874 (endemic of Turkmenistan): Repetek (Ts: IV); Badkhyz (P: 14.VI); Yaskhan (RV: 27.IV); Tshilmamed-Kum (H: IV); Lambe (D: 3.VI); Bairam-Ali (B: 1.V–26.VI); Tschardzhou (ZIN: 12.V).

307. ***Periphanes delphinii*** Linnaeus, 1758 (Mediterranean): Kara-Kala m. d. (K: 19.IV–2.V); Badkhyz (D: 22.V); Yaskhan (RV: 2.V); Repetek (Ts: IV); Dardja (H: 15.IV); Deinau (D: 22.V); Imam-Baba (Kozh: 1.IV–10.V).

308. ***Periphanes victorina*** Sodofsky, 1849 (east-Mediterranean): Ai-Dere (K: 20.V).

309. ***Aedophron phlebophora*** Lederer, 1859 (Iran-Turanian): Ai-Dere (K: 23.V).

310. ***Aedophron venosa*** Christoph, 1887 (Iran-Turanian): Kara-Kala (K: V); Iol-Dere (K: 1–12.V); Syunt (K: 2.V); Ashkhabad (Pt: 16.V); Tshuli (Pt: 24.V).

311. ***Stemmaphora viola*** Staudinger, 1888 (Iran-Turanian): Kara-Kala (Ts); Ashkhabad (K: 27.III).

312. ***Turacina ceratopyga*** Püngeler, 1902 (middle Asian): Repetek (Ts: 28.III–8.IV; Dl: 18–20.IV); Deinau (D: V); Yaskhan (RV: 27.IV–4.V); Tshilmamed-Kum (H: IV); Kara-Takyr (H).

313. ***Erythrophaia suavis*** Staudinger, 1888 (middle Asian): Deinau, Lambe (D: V); Repetek (Ts); Bairam-Ali (B: 2.IV); Ashkhabad (B: 20–22.V).

314. ***Hebdomochondra syrticola*** Staudinger, 1889 (Iran-Turanian): Repetek (Ts: IV–X); Yaskhan (RV: 27.IV–4.V); Lambe (D: V); Ashkhabad (Pt: 4.VI–28.IX).

Subfamily Acontiinae

*315. ***Metachrostis dardouini*** Boisduval, 1840 (east-Mediterranean): Kara-Kala (Dev: 16.IV).

316. ***Thalomicra debilis*** Christoph, 1884 (Iran-Turanian): Kara-Kala, Kara-Kala m. d. (K: 7.V–28.VII).

317. ***Eublemma ostrina*** Hübner, 1808 (Transpalaearctic): Badkhyz (Sv); Kara-Kala m. d. (K: 26.V–23.VI).

318. ***Eublemma parva*** Hübner, 1808 (Mediterranean): Kara-Kala, Kara-Kala m. d., Ai-Dere (K: 13.V–23.VIII).

*319. ***Eublemma rosea*** Hübner, 1790 (east-Mediterranean): Kara-Kala (Dev).

320. ***Eublemma respersa*** Hübner, 1790 (Mediterranean): Kara-Kala (K: 18–27.V); Tshuli (Kaz: 17.IX).

321. ***Eublemma parallela*** Freyer, 1841 (east-Mediterranean): Kara-Kala (K: 18.V–7.VI).

322. ***Eublemma polygramma*** Duponchel, 1836 (Mediterranean): Kara-Kala m. d., Iol-Dere, Syunt (K: 12.VI–26.VII); Kara-Kala (K: 10.V–5.VI).

323. ***Eublemma munda*** Christoph, 1884 (endemic of Kopet-Dagh): Kara-Kala m. d., Ai-Dere, Syunt (K: 27.V–23.VI).

324. ***Eublemma albida*** Staudinger, 1892 (Iran-Turanian): Syunt (K: 23.VI).

*325. ***Eublemma viridis*** Staudinger, 1888 (Iran-Turanian): Badkhyz (P: 11–27.V).

326. ***Eublemma chlorotica*** Lederer, 1858 (Iran-Turanian): Kara-kala m. d. (K: 7.IV–26.V); Kara-Kala (K: 26.V).

*327. ***Eublemma uniformis*** Staudinger, 1887 (Iran-Turanian): Tschardzhou (Kozh: 23.IV); Bairam-Ali (B: 30.IV).

328. ***Eublemma pallidula*** Herrich-Schäffer, 1845 (Iran-Turanian): Iol-Dere, Syunt, Kara-Kala (K: 5.VI–25.VII).

329. ***Phyllophila numerica*** Boisduval, 1840 (ssp. *ornatula* Christoph, 1887) (east-Mediterranean): Kara-Kala (Kaz: 10.V); Syunt, Kara-Kala m. d. (K: 13.VI); Tshuli (Pt: 24.V).

330. ***Phyllophila obliterata*** Rambur, 1833 (Transpalaearctic): Kara-Kala (K: 23.V–30.VI).

331. ***Jaspidia delicatula*** Christoph, 1882 (Iran-Turanian): Iol-Dere, Ai-Dere, Syunt, Kara-Kala (K: 6–20.VIII).

332. ***Emmelia trabealis*** Scopoli, 1763 (Transpalaearctic): Murgab(Ts: 9.VII); Lambe, Deinau (D:.V); Badkhyz (P: 17.V–1.VII); Kara-Kala (K: 13–18.V, 24.VI–14.VII, 23.VIII); Kara-Kala m. d., Iol-Dere (K); Yaskhan (RV: 29.IV).

333. ***Acontia urania*** Frivaldszky, 1835 (Mediterranean): Sumbar (K: 3.VIII).

334. ***Acontia lucida*** Hufnagel, 1767 (west-Palaearctic): Bairam-Ali (B: 16.IX); Lambe (D: 15.V); Badkhyz (P: 21.IV–25.V); Sv); Kara-Kala (K: 30.IV–21.VIII); Kara-Kala m. d., Ai-Dere (K); Yaskhan (RV: 27.IV).

335. ***Tyta luctuosa*** [Denis & Schiffermüller], 1775 (west-Palaearctic): Tschardzhou (D: IV–VI); Mary (Tr: 7.IV); Ai-Dere (A: 16.VI); Kara-Kala (A: 1.VIII; K: 7.IV–10.VIII); Syunt (K).

Subfamily Euteliinae

336. ***Eutelia adulatrix*** Hübner, 1813 (Mediterranean): Badkhyz (P: 29.IV–4.V; Sv).

Subfamily Chloephorinae

337. ***Earias chlorana*** Linnaeus, 1761 (west-Palaearctic): Sumbar (K: 24.VIII).
*338. ***Earias turana*** Grum-Grshimailo, 1899 (Iran-Turanian): Iolotan (V: 13.IX).
*339. ***Earias roseipes*** Filipjev, 1933 (Iran-Turanian): Tschardzhou (S: 20.VIII).

Subfamily Sarrothripinae

340. ***Nycteola asiatica*** Krulikowsky, 1904 (Iran-Turanian): Kara-Kala, Iol-Dere, Ai-Dere (K: 11–19.V, 16–24.VI, 15.VII– 9.VIII).
*341. ***Bryophiliopsis roederi*** Standfuss, 1892 (Iran-Turanian): Badkhyz (P: 4.V–1.VII).

Subfamily Plusiinae

*342. ***Trichoplusia orichalcea*** Fabricius, 1775 (cosmopolitan): Badkhyz (P: 7.VI).
343. ***Trichoplusia ni*** Hübner, 1803 (cosmopolitan): Tschardzhou (S: 22–29.VI, 9.V); Lambe, Deinau (D: IV–VI); Repetek (Kos: 22–25.V; Ts: V, IX, X); Ashkhabad (Pt: 11.VI); Badkhyz (P: 22.IV; Sv); Kara-Kala, Ai-Dere (K: 17.IV–20.V, 17.VI–19.VIII); Yaskhan (RV: 29.IV); Nebit-Dagh (H: 10.VI, IX).
344. ***Chrysodeixis chalcites*** Esper, 1789 (tropical, subtropical): Imam-Baba (Dan: 21.X); Nebit-Dagh (H: IX).
345. ***Desertoplusia bella*** Christoph, 1887 (Iran-Turanian): Ashkhabad (Pt: 16.VI); Kara-Kala m. d., Syunt (K: V).
346. ***Autographa gamma*** Linnaeus, 1758 (holarctic): Lambe (D: V, VI); Repetek (Kos: 22–25.V; Ts: VIII, X); Badkhyz (P: 13.X; Sv); Kara-Kala, Ai-Dere, Kizyl-Arvat (K); Yaskhan (RV: 29.IV; H: 24.IX); Nebit-Dagh (H: IX); Tshilmamed-Kum (H: X); Bugdaili (D: 12.IX).
347. ***Macdounnoughia confusa*** Stephens, 1850 (Transpalaearctic): Badkhyz (Sv); Yaskhan (RV: 30.IV).
348. ***Plusia festucae*** Linnaeus, 1758 (Transpalaearctic): Yaskhan (RV: 30.IV).
349. ***Cornutiplusia circumflexa*** Linnaeus, 1767 (tropical, subtropical): Deinau (D: 1.V); Bairam-Ali (Ts: 18.III); Badkhyz (P: IV; Sv); Kara-Kala (K: 16.VI); Repetek (Ts: 31.III); Nebit-Dagh (H: 15.IV–20.V); Bugdaili (D: 22.V); Ashkhabad (Kaz: 17.V).

Subfamily Catocalinae

350. ***Astiotes neonympha*** Esper, 1796 (east-Mediterranean): Tschardzhou (Kozh: 23.IV); Lambe (D: IV, V); Badkhyz (Ts: 1.VII; Sv); Kara-Kala, Kara-Kala m. d., Iol-Dere (K: 24.VI– 28.VII).
351. ***Catocala elocata*** Esper, 1786 (west-Palaearctic): Lambe (D: 20.V); Badkhyz (Ts: 20.IX); Kara-Kala, Kara-Kalam. d. (K: 27.IV–2.VII); Syunt (K: 25.VII).
352. ***Catocala puerpera*** Giorna, 1791 (Transpalaearctic): Murgab, Kushka (Ts); Lambe (D: 5.VI); Badkhyz (P: 24.VI); Kara-Kala, Kara-Kala m. d. (K: 25.VI–17.VII); Danata (D: 1.VI).
353. ***Catocala remissa*** Staudinger, 1881 (middle Asian): Repetek (Mak: 23.VI).
354. ***Catocala lupina*** Herrich-Schäffer, 1851 (Mediterranean): Lambe (D: V, VI).

355. ***Catocala timur*** Bang-Haas, 1907 (Iran-Turanian): Murgab (RV); Repetek (Mak: 23.VI).

356. ***Catocala juncta*** Staudinger, 1889 (mountain middle Asian): Badkhyz (Ts: 10.VI); Yaskhan (RV: 30.V).

357. ***Catocala optima*** Staudinger, 1888 (Iran-Turanian): Murgab (D).

358. ***Catocala lesbia*** Christoph, 1887 (Mediterranean): Nebit-Dagh (H: XII); Germab (RV); Ashkhabad (Pt: 10.VII).

359. ***Catocala eastimabilis*** Staudinger, 1881 (middle Asian): Repetek (Mak: 22.VI).

*360. ***Ophiusa tirhaca*** Cramer, 1780 (east-Mediterranean): Tshuli (Kaz: 26.IX).

361. ***Dysgonia algira*** Linnaeus, 1767 (tropical, subtropical): Kara-Kala, Kara-Kala m. d. (A: 1.VIII; K: 11.VI–24.VIII); Iol-Dere (K: 12.VI–14.VIII).

362. ***Dysgonia rogengoferi*** Bohatsch. (Iran-Turanian): Sumbar (K: 3.VII).

363. ***Clytie syriaca*** Bugnion, 1837 (east-Mediterranean): Deinau (D: 10.IX); Ai-Dere (A: 14.VI); Ashkhabad (D: 24.IV); Badkhyz (P: 14.IV; Sv); Repetek (Ts: 14–16.IV; ZIN: 27.VI); Yaskhan (RV: 24.IX); Nebit-Dagh (H: 1.VI); Bugdaili (D: 22.IV); Bairam-Ali (B: 16.VIII); Kara-Kala, Kara-Kala m. d. (K: 14.V–22.VIII); Tshilmamed-Kum (H: X).

364. ***Clytie delunaris*** Staudinger, 1889 (Iran-Turanian): Badkhyz (Sv); Repetek (Ts: 11–14.V).

365. ***Clytie luteonigra*** Warren, 1914 (middle Asian): Yaskhan (RV: 27.IV–4.V).

366. ***Clytie terrulenta*** Christoph, 1893 (middle Asian): Lambe (D: 11 V); Badkhyz (P: 15.IV–9.V); Kara-Kala (K: 23.V–19.VII); Bugdaili (D: 25.V).

367. ***Prodotis stolida*** Fabricius, 1775 (tropical, subtropical): Lambe (D: 20.V); Kara-Kala, Ai-Dere (K: 9.V–12.VIII); Uzun-Su (D: 7.VI); Ashkhabad (Pt: 19.VII).

368. ***Perycima albidentaria*** Freyer, 1842 (Mediterranean): Tschardzhou (Kozh: 23.IV; S; 23.VII–18.VIII); Deinau (D:V); Bairam-Ali (B: 26.V–9.IX); Repetek (Kozh: 9.VII; Ts: 30.IV–14.V); Ashkhabad (Pt: 17.VII; D: 26.VI, 15.VIII); Nebit-Dagh (H: 10.III, 10.V–10.VI; Tr: 27.VIII); Yaskhan (RV: 27.IV–4.V); Badkhyz (P: 22.IV–9.IX; Sv); Kara-Kala (K: 28.IV–24.VIII); Kara-Kala m. d., Ai-Dere, Iol-Dere (K); Adjiap (D: 7.X); Akibay (D: 5.V–3.X); Sakar-Tschaga (D: 27.VI).

369. ***Perycima squalens*** Lederer, 1855 (east-Mediterranean): Iolotan (V: 21.VIII–12.IX); Badkhyz (P; Sv); Kara-Kala (K: 27.V–29.VII).

370. ***Heteropalpia profesta*** Christoph, 1887 (Iran-Turanian): Iolotan (V: 16.IX); Badkhyz (P: 9.V–1.IX; Sv); Kara-Kala (K: 19.V, 22.VI–22.VIII).

371. ***Anydrophila imitatrix*** Christoph, 1887 (Iran-Turanian): Badkhyz (P: 22.V).

372. ***Anydrophila simiola*** Püngeler, 1899 (Iran-Turanian): Tshilmamed-Kum (H: V); Nebit-Dagh (H: 10.VII); Kizyl-Arvat (ZIN); Badkhyz (P: 17.V); Tschardzhou (S: 8.V); Repetek (Ts: IV, V).

373. ***Anydrophila mirifica*** Erschoff, 1874 (Iran-Turanian): Tshilmamed-Kum (H: V); Badkhyz (P: 13.V); Repetek (Ts: V; Kos: 22–25.V); Tschardzhou (S: 8.V).

374. ***Euclidia munita*** Hübner, [1818] (east-Mediterranean): Deinau, Lambe (D: V).

375. ***Hypoglaucitis distincta*** Bang-Haas, 1907 (endemic of Turkmenistan): Repetek (Kos: 22–25.V); Nebit-Dagh (Tr: 11.VI); Badkhyz (P: 17.VIII; Sv); Kara-Kala m. d. (K: 21.VI–2.VIII); Kushka (K).

Subfamily Ophiderinae

376. ***Acantholipes regularis*** Hübner, [1814] (Mediterranean): Bairam-Ali (B: 28.VIII); Lambe, Deinau (D: IV–VI); Mary (D); Badkhyz (P: 1.VII; Sv); Kara-Kala m. d. (K: 24.VIII; S: 22.VII); Repetek (Ts: 1.V).

377. ***Acantholipes singularis*** Gerasimov, 1931 (middle Asian): Repetek (Ts).

378. ***Lygephila craccae*** [Denis & Schiffermüller], 1775 (Transpalaearctic): Syunt (K: 25.VII); Kara-Kala (K: 11.V); Danata (D: 25.V).

379. ***Lygephila procax*** Hübner, [1813] (=*limosa* Treitschke, 1826) (Mediterranean): Syunt (K: 25.VII); Iol-Dere (K: 6.VII).

*380. ***Exophila rectangularis*** Hübner, 1824 (Mediterranean): Ai-Dere (Mim: 1.V); Ashkhabad (Pt: 5.VII).

381. ***Catephia alchymista*** [Denis & Schiffermüller], 1775 (Mediterranean): Parhay (Mim: 27.IV); Kara-Kala (Mim: 22.IV).

382. ***Drasteria picta*** Christoph, 1877 (Iran-Turanian): Tshilmamed-Kum (H: IV, V); Imam-Baba (Kozh: 1.IV–10.V); Bairam-Ali (B: 1.IV); Kizyl-Arvat (St: 7.VI); Tschardzhou (S: 8.V); Badkhyz (P; 16.IV–2.V; Sv); Ai-Dere (K: 15.IV–23.V); Yaskhan (RV: 27.IV–4.V); Repetek (Ts: III, IV, VIII); Dardja (H: 15.IV); Ashkhabad (Pt: 10.VI, 8.IX).

383. ***Drasteria sesquistria*** Eversmann, 1854 (east-Mediterranean): Imam-Baba (Kozh: 1.IV–10.V); Bairam-Ali (B: 1.V); Repetek (Dl: 18–20.IV; Kos: 6.VI; Ts: IV, VII, VIII); Tschardzhou (S: 8.V); Yaskhan (RV: 27.IV–4.V; H: 24.IX); Tshilmamed-Kum (H: IV, V); Dardja (H: 5–15.IV); Ashkhabad (Pt: 18.VIII).

384. ***Drasteria cailino*** Lefebvre, 1827 (Mediterranean): Repetek (Kos: 5.VI); Iol-Dere, Ai-Dere, Syunt (K: 7.IV–20.VIII); Kara-Takyr (H); Kara-Kala (K: 27.VI); Tschardzhou (S: 16.VI).

*385. ***Drasteria kuznezovi*** John, 1910 (middle Asian): Kara-Kala (L: 9.IX).

386. ***Drasteria caucasica*** Kolenati, 1846 (east-Mediterranean): Lambe (D: 23.IV); Kara-Kala (K: 25.V–9.VII); Tschilmamed- kum (H: V).

*387. ***Drasteria hyblaeoides*** Moore, 1878 (mountain middle Asian): Iolotan (B: 13.IX); Tschardzhou (S: 8.V).

*388. ***Drasteria aberrans*** Staudinger, 1888 (mountain middle Asian): Imam-Baba (Kozh: 9.V; Dan: 14.X).

389. ***Drasteria herzi*** Alphéraky, 1895 (Iran-Turanian): Kara-Kala (K: 4.IV, 4.VIII); Repetek (Ts: IV, VIII, IX).

390. ***Drasteria sesquilina*** Staudinger, 1888 (middle Asian): Ashkhabad (Pt: 17.VII); Mary (Don).

391. ***Drasteria saisani*** Staudinger, 1882 (east-Mediterranean): Kara-Kala, Kara-Kala m. d. (K: 13.IV–26.V); Syunt (K: 7.V–2.VI).

392. ***Drasteria sinuosa*** Staudinger, 1884 (middle Asian): Krasnovodsk (ZIN); Tschardzhou (D: IV; S: 20.VI); Nebit-Dagh (Tr: 14.IX); Repetek (Kos: 22–25.V, 5.VI; Ts: IV); Kizyl-Arvat (St: 7.VI); Yaskhan (RV: 27.IV–4.V); Badkhyz (Ts: 7.V); Tshilmamed-Kum (H: IV).

393. ***Drasteria flexuosa*** Ménétriés, 1849 (Iran-Turanian): Bairam-Ali (B: 30.VII); Ts: 11.IV); Lambe, Deinau (D: IV, IX); Tschardzhou (S: 8.V, 23.VII–18.VIII); Repetek (Ts: IV, IX); Mary (D); Badkhyz (P: 1.VII–19.VIII; Sv); Kizyl-Arvat (H: 23.V); Kara-Takyr (H); Kara-Kala (K: 22.VIII); Yaskhan (RV: 27.IV–4.V); Danata (D: 12–18.IX, 5.X); Dardja (H: 15.IV); Bugdaili (D: 27.VI).

394. ***Metoponzhis karakumensis*** Gerasimov, 1931 (Iran-Turanian): Badkhyz (Sv); Yaskhan (RV: 27.IV–4.V); Tshilmamed-Kum (H: IV).

395. ***Metoponzhis albirena*** Christoph, 1887 (endemic of Turkmenistan): Kara-Kala, Kara-Kala m. d. (K: 29.IV–26.V; Sv: 10.V); Iol-Dere, Ai-Dere (K).

396. ***Epharmottomena nana*** Staudinger, 1887 (Iran-Turanian): Imam-Baba (Kozh: 1.IV–10.V); Repetek (22–25.V); Ts: IV, V); Badkhyz (P: 31.IV–11.V; Sv); Yaskhan (RV: 27.IV–4.V); Tshilmamed-Kum (H: 20.IV–5.VI).

397. ***Drasteriodes kisilkumensis*** Erschoff, 1874 (endemic of Turkmenistan): Krasnovodsk (W); Repetek (Ts: IV, V); Yaskhan (RV: 27.IV–4.V); Tshuli (Pt: 16.V).

398. ***Drasteriodes limata*** Christoph, 1884 (tropical, subtropical): Tshilmamed-Kum (H); Imam-Baba (Kozh: 1.IV–10.V); Bairam-Ali (B: 18.IV); Ashkhabad (Pt: 22.III–9.IV; L: 26.III); Badkhyz (P: 8–20.IV); Ai-Dere (25.IX); Kara-Takyr (H); Repetek (Ts: III, IV).

399. ***Iranada secunda*** Erschoff, 1874 (Iran-Turanian): Repetek (Ts: IV, V); Kizyl-Arvat (H; W); Tschardzhou (S: 8.V); Imam-Baba (Kozh: 1.IV–10.V); Iolotan (V: 1.V); Yaskhan (RV: 27.IV–4.V); Badkhyz (P: 11.VI–19.IX); Kizyl-Arvat, Ai-Dere (K); Bugdaili (D: 22.V); Ashkhabad (Pt: 13.V).

400. ***Metopistis erschoffi***, Christoph, 1884 (Iran-Turanian): Kizyl-Arvat (Ts: 12.IV); Repetek (Ts: III, IV); Badkhyz (P: 3.V); Ai-Dere (K).

*401. ***Acrobyla eylandti*** Christoph, 1884 (Iran-Turanian): Badkhyz (P: 21.V–21.VI; Sv).

*402. ***Armada dentata*** Staudinger, 1884 (Iran-Turanian): Kizyl-Arvat (St: 7.VI); Tschardzhou (S: 16.VI).

403. ***Acrobyla panaceorum*** Ménétriés, 1849 (east-Mediterranean): Imam-Baba (Kozh: 1.IV–10.V); Yaskhan (RV: 27.IV); Bairam-Ali (B: 2.V; Ts: 10–30.IV); Mary (D: 25.IV); Ashkhabad (D: 20.IV; Pt: 1.V); Badkhyz (P: 22.IV; Sv); Repetek (Ts: 22.V); Kara-Kala, Kara-Kala m. d. (K: 20.IV–16.V); Tshilmamed-Kum (H: IV); Kisyl-Arvat (K).

404. ***Acrobyla clio*** Staudinger, 1884 (Iran-Turanian): Imam-Baba (Kozh: 1.IV–10.V); Tschardzhou (Kozh: 23.IV; S: 8.V); Repetek (Kos: 22–23.IV); Iolotan (V: 22.IV); Ashkhabad (Pt: 10.VII); Badkhyz (P: 22.IV–5.VI); Sv); Yaskhan (RV: 27.IV–4.V); Nebit-Dagh (H: 10.VI).

405. ***Tarachephila hueberi*** Erschoff, 1874 (Iran-Turanian): Imam-Baba (Kohz: 1.IV–10.V); Bairam-Ali (B: 8.V); Iolotan (V: 20–22.IV); Badkhyz (P: 20–22.IV; Pt: 6.VI); Kara-Kala, Kara-Kala m. d. (K: 7.IV–26.VI); Yaskhan (RV: 27.IV–4.V); Repetek (Ts: IV, V).

406. ***Marsipiophora christophi*** Erschoff, 1874 (Iran-Turanian): Imam-Baba (Kozh: 1.IV–10.V); Tschardzhou (S: 8.V); Bairam-Ali (B: 22.V): Yaskhan (RV: 27.IV–4.V); Repetek (Ts: IV; Kos: 22.V– 5.VI).

407. ***Anumeta spilota*** Erschoff, 1874 (Iran-Turanian): Imam-Baba (Kozh: 1.IV–10.V); Repetek (Ts: V); Yaskhan (RV: 27.IV–4.V); Badkhyz (Sv); Nebit-Dagh (H: 1.VI); Ashkhabad (Pt: 13.V).

408. ***Anumeta henkei*** Staudinger, 1877 (Iran-Turanian): Imam-Baba (Kozh: 1.IV–10.V); Repetek (Kos: 22.IV–4.V: Ts: IV, X); Tschardzhou (S: 8.V); Yaskhan (RV: 27.IV–4.V); Kizyl-Arvat (ZIN); Ashkhabad (Pt: 4.VI; S: 6.VI–31.VII).

409. ***Anumeta dentistrigata*** Staudinger, 1877 (mountain middle Asian): Bairam-Ali (B: 28.V); Imam-Baba (Kos: 22.V); Repetek (Kos: 5.VI; Ts: III, IV); Ashkhabad (ZIN); Kara-Takyr (H: VI); Yaskhan (RV: 27.IV); Tshilmamed-Kum (H: IV); Dardja (H: 15–30.IV, 10.V).

410. ***Anumeta cestis*** Ménétriés, 1847 (east-Mediterranean): Imam-Baba (Kozh: 1.V–10.V); Bairam-Ali (B: 1.V–9.VIII); Repetek (Dl: 18–20.IV; Z: 3–9.III; Kos: 22–25.V; Ts: III–X); Tschardzhou (S: 8.V); Kara-Takyr (H: V); Badkhyz (Sv); Yas-khan (RV: 27.IV–4.V); Tshilmamed-Kum (H: IV); Dardja (H: 15–30.IV); Ashkhabad (Pt: 16.V).

411. ***Anumeta cestina*** Staudinger, 1884 (Iran-Turanian): Imam-Baba (Kozh: 1.IV–10.V); Repetek (Dl: 18–20.IV; Ts: III); Tschardzhou (S: 8.V); Badkhyz (Sv); Yaskhan (RV: 27.IV–4.V); Ashkhabad (Pt: 22.VI).

412. ***Anumeta fricta*** Christoph, 1896 (endemic of Kopet-Dagh): Repetek (Dl: 18–20.IV; Kos: 22–25.V; 5.VI; Ts: III, IV); Tschardzhou (S: 8.V); Kara-Takyr (H: V); Tshilmamed-Kum (H: IV).

413. ***Anumeta fractistrigata*** Alphéraky, 1883 (endemic of Turkmenistan): Imam-Baba (Kozh: 1.IV–10.V); Yaskhan (RV: 27.IV–4.V); Tschardzhou (Kozh: 23.IV; S:

29.VII); Mary (Kel: 16.IV); Repetek (Dl: 18–20.IV; Ts: VII–XII); Badkhyz (Sv); Kizyl-Arvat (H: 23.V); Sumbar (K: 4.VII); Nebit-Dagh (H: 10.V–1.VI).

414. ***Pandesma robusta*** Walker, 1858 (=*anysa* Guenée, 1853) (middle Asian): Lambe (D: IV,.V); Tschardzhou (S: 23.VII); Ai-Dere (A: 14.VI); Badkhyz (P: 4.V–30.X); Nebit-Dagh (H: 15.IV, 5.VI); Kara-Kala (K: 20.VI–10.VII); Repetek (Ts: 16.V).

*415. ***Zethes propinquus*** Christoph, 1885 (Iran-Turanian): Badkhyz (P: 20.IV, 1.VII; Sv).

416. ***Imitator ciliaria*** Ménétriés, 1847 (mountain middle Asian): Repetek (Ts: I, III).

417. ***Imitator Imitator*** Püngeler, 1901 (Iran-Turanian): Mary (Sz); Badkhyz (P: 21.III–9.IV); Repetek (Ts: III, IV).

Subfamily Hypeninae

*418. ***Hypena palpalis*** Hübner, 1796 (Mediterranean): Ashkhabad (Pt: 30.IV).

419. ***Dichromia opulenta*** Alphéraky, 1877 (Mediterranean): Iol-Dere (K: 16.VI–20.VIII); Ashkhabad (Pt: 18.VIII).

420. ***Rhynchodontodes ravalis*** Staudinger, 1851 (middle Asian): Repetek (Ts: 14.VI, 25.IX); Bairam-Ali (B: 11.VII); Lambe (D: V); Kara-Kala (A: 1.VIII; K: 9.V–23.VIII); Kara-Kala m. d. (K); Iolotan (V: 15.VIII); Nebit-Dagh (Tr: 11– 16.IX); Kizyl-Arvat (H: 23.V); Badkhyz (P: 7.V–25.VIII); Iol-Dere, Ai-Dere, Syunt (K); Adjiap (D: 7.X); Ashkhabad (Pt: 10.VI).

421. ***Rhynchodontodes ravularis*** Staudinger, 1879 (middle Asian): Repetek (Ts: 21.IV).

422. ***Rhynchodontodes revolutaris*** Zeller, 1852 (Iran-Turanian): Badkhyz (P: 16.VIII; Sv); Yaskhan (RV: 27.IV–4.V).

423. ***Rhynchodontodes soricalis*** Püngeler, 1908 (endemic of Turkmenistan): Deinau (D: 10.IX); Ashkhabad (Pt: 6–12.VII).

424. ***Rhynchodontodes amseli*** Wiltshire, 1961 (Iran-Turanian): Badkhyz (Sv); Kizyl-Arvat (St: 1.VI).

425. ***Schrankia balneorum*** Alphéraky, 1881 (Iran-Turanian): Kara-Kala (K: 10.VII–22.VIII).

426. ***Hypenodes orientalis*** Staudinger, 1901 (east-Mediterranean): Kara-Kala, Iol-Dere, Syunt (K: 1.VI–22.VII).

5. A zoogeographical analysis of the Noctuid moth fauna of Turkmenistan

Up to present, 426 Noctuid moth species have been recorded from Turkmenistan. Since a check list of the Noctuidae of adjacent Kyrghyzstan comprises 414 species (Nekrasov, Poltavsky & Ribin 1988) we may suspect the present list to be rather complete. Certain differences in composition (both quantitative and qualitative) of the Noctuid fauna among eight natural regions distinguished inTurkmenistan should be pointed out. The most abundant of these regions is Kopet-Dagh mountain area (4), while Caspian Sea (1), Amu-Darya midflow (8) and Murgab-Tedjen oasis (5) areas represent the poorest regions (table 1). The region 1 is characteristic with rigorous climatic conditions (to explain the poverty of its Noctuid-moth fauna), whereas the regions 5 and 8 cover the most developed agricultural area. Therefore the anthropogenic influence is suggested to be a limiting factor for the Noctuid moth species diversity. Indeed, the less agriculturally developed regions 2, 3, 6 and 7 display considerably richer faunas. The Noctuid moth faunal relationships between pairs of regions are expressed through the Czekanowski-Sorensen indexes (CS – cf. Czekanowski 1909; Sørensen 1948) as shown in table 2.

These relations are also depicted as a dendrogram (fig. 12). The closest similarity is established between regions 7, 8 and 1 (58–61%), somewhat less between 2 and 4 (49%). There are two distinctive clusters at 45% level established: 7–8–1–5 and 2–4–6, and the most distinct from all others is the region 3. For the purpose of zoogeographical analysis of the Noctuid-moth fauna, a distributional group classification system based upon range- and complex-type subdivisions most commonly used in Russian entomological literature is accepted here. In some cases it appeared to be rather rough, but our intention was to escape more fractional system.

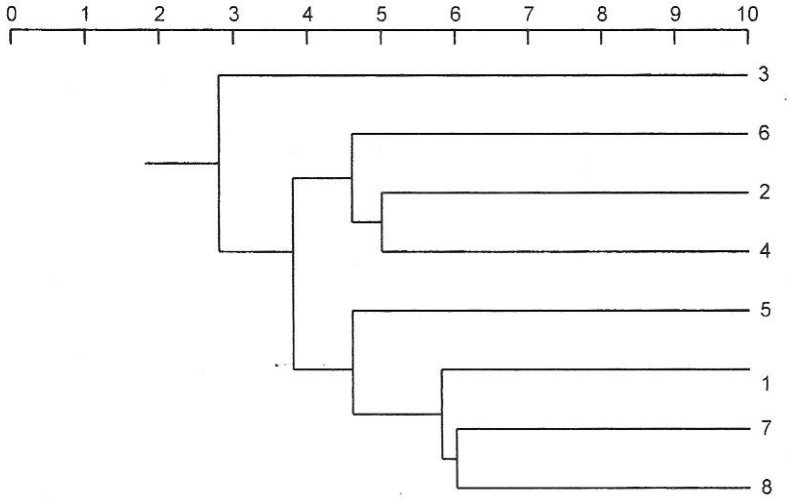


Fig. 12: Dendrogram of the Noctuidae fauna relations between the 8 natural regions of Turkmenistan (average linkage).

A brief definition of the range types

1. Cosmopolitan – occurring over all or almost all continents.

Polyzonal complex:

2. Holarctic – Nearctic and Palaearctic.
3. Transpalaearctic – entire Palaearctic, sometimes with disjunct range.
4. West-Palaearctic – Palaearctic, except of Eastern Siberia and the Far East.
5. Mongolian-Siberian – Eastern Siberia, Mongolia, highland regions of Middle Asia.

Mediterranean complex:

6. Mediterranean – Mediterranean region, Near East, Middle Asia, southern and eastern Europe.
7. East Mediterranean – as previous, except of West-Mediterranean and southern Europe.

Central-Palaearctic complex:

8. Middle Asian – Middle Asia, northern Iran and Afghanistan.
9. Mountain middle Asian – highland areas of Middle Asia and Central Asia.
10. Iran-Turanian – Turkmenistan, Iran, Afghanistan, Transcaucasus.
11. Endemics of Kopet-Dagh and Turkmenistan – Turkmenistan, northern Iran and Afghanistan.

Subtropical complex:

12. Tropical and subtropical – southern and south-eastern Asia, some of these species deeply penetrate the Palaeartic region.

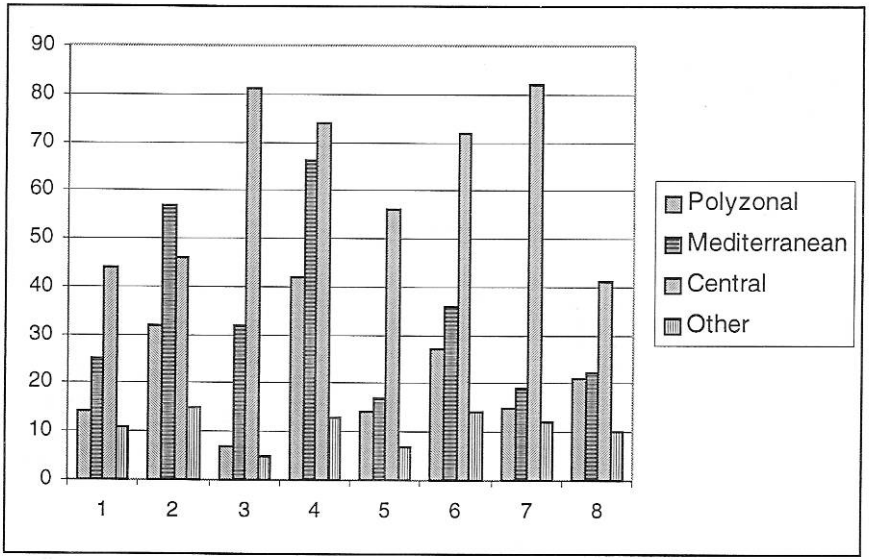


Fig. 13: Zoogeographical complexes of Turkmenian Noctuidae.

Table 3 shows the occurrence of the above defined 12 distributional groups in 8 natural regions of Turkmenistan. For their comparative share and mutual relationships see figs. 13–15. The Central-Palaearctic zoogeographical complex is found to be the most abundant (52.1%), almost two-fold poorer is Mediterranean (26.3%) and just 16.7% of the total Noctuid-moth fauna is represented in Polyzonal complex. In the faunas of eight Turkmenistani natural regions this correlation is rather variable, but everywhere, except of region 2, the major role is played by the Central-Palaearctic, and less by the Polyzonal complex. At the same time all natural regions display closest relationship to the Central-Palaearctic complex.

The relationship index of Noctuid-moth faunas of Turkmenistan and Kyrghyzstan is very low: CS = 28.5%. The share of the Mediterranean complex in Kyrghyzstan is twice lower than in Turkmenistan and contains only 13.9% of species. Similarly, Iran-Turanian group is represented in Turkmenistan with 22.3% of species, in Kyrghyzstan with only 7.0%. On the other hand, the Noctuid-moth fauna of Kyrghyzstan is characteristic with its dominated Central-Asian group (26.8%), absent in Turkmenistani fauna (species like

Ochropleura venosa Kozh., *O. disturbans* Pngl., *Eugraphe ornata* Stgr., *Hadula sabulorum* Alph., *Haderonia zetina* Stgr., *Photedes urbanni* Brsn. etc.).

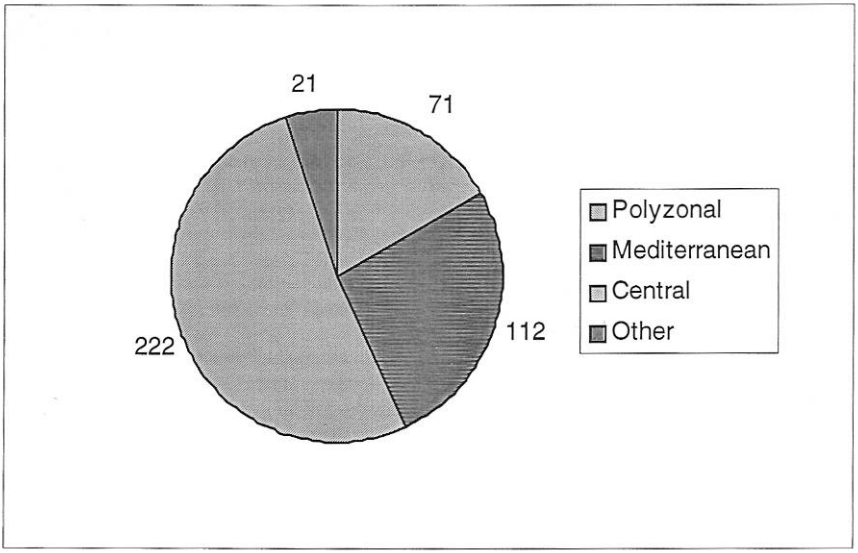
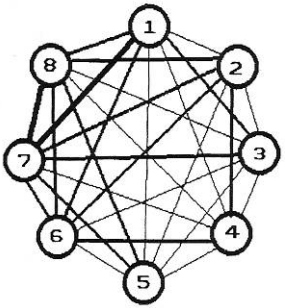


Fig. 14: Zoogeographical complexes of Turkmenian Noctuidae (total fauna).

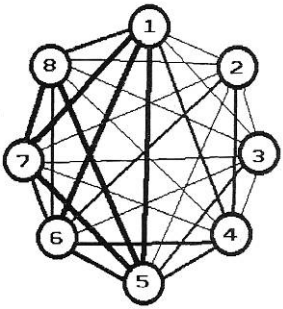
Table 1: Comparative abundance of Noctuid-moth higher systematic groups in 8 natural regions of Turkmenistan.

Subfamilies	Natural regions (for codes see section 3)								whole region
	1	2	3	4	5	6	7	8	
1. Agrotinae	19	30	42	42	15	36	14	12	**93**
2. Hadeninae	11	17	10	23	9	13	16	11	**51**
3. Cuculliinae	6	15	11	21	12	19	8	3	**47**
4. Acronictinae	3	4	4	8	1	3	0	1	**12**
5. Amphipyrinae	17	30	23	47	18	23	32	18	**96**
6. Heliothinae	7	8	3	9	3	7	8	9	**15**
7. Acontiinae	0	15	1	12	3	4	3	4	**21**
8. Euteliinae	0	1	0	1	1	0	0	1	**1**
9. Chloephorinae	0	1	0	0	1	1	0	0	**3**
10. Sarrothripinae	0	1	0	1	0	0	0	1	**2**
11. Plusiinae	3	2	2	3	1	5	4	2	**8**
12. Catocalinae	7	11	6	9	8	14	11	12	**26**
13. Ophiderinae	20	13	18	17	20	20	28	18	**42**
14. Hypeninae	1	2	5	2	2	4	4	2	**9**
Total	**94**	**150**	**125**	**195**	**94**	**149**	**128**	**94**	**426**

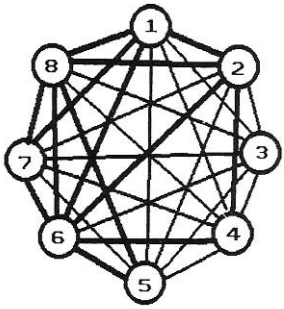


7-28%
9-49%
50-69%

Polyzonal complex



Mediterranean complex



Centralpalaearctic complex

Fig. 15: Relation between Noctuidae faunas of Turkmenian regions according to the zoogeographical complexes.

Table 2: Relative similiarity of the noctuid-moth fauna of the 8 natural regions of Turkmenistan (Czekanowski-Sørensen indexes).

	Natural regions (for codes see section 3)						
	8	7	6	5	4	3	2
1	0. 56	0. 60	0. 53	0. 41	0. 34	0. 34	0. 39
2	0. 40	0. 32	0. 43	0. 25	0. 49	0. 21	
3	0. 28	0. 32	0. 29	0. 31	0. 30		
4	0. 31	0. 30	0. 47	0. 26			
5	0. 46	0. 48	0. 42				
6	0. 44	0. 53					
7	0. 61						

Table 3: Comparative abundance of the noctuid-moth zoogeographical groups in different natural regions of Turkmenistan.

Zoogeographical groups and complexes	Natural regions (for codes see section 3) 1	2	3	4	5	6	7	8	whole region
1. Cosmopolitan	6	7	2	7	3	9	7	6	**10**
Polyzonal									
2. Holarctic	4	4	1	4	1	4	4	3	**7**
3. Transpalaeartic	6	15	2	17	7	14	9	12	**32**
4. West-Palaearctic	4	13	3	20	5	8	2	6	**30**
5. Mongolian-Siberian	0	0	1	1	1	1	0	0	**2**
Mediterranean complex									
6. Mediterranean	15	32	19	38	6	22	11	11	**65**
7. East-Mediterranean	10	25	13	28	11	14	8	11	**47**
Central-Palaearctic complex									
8. Middle Asian	21	13	24	20	21	21	28	13	**63**
9. Mountain Middle Asian	4	2	12	8	6	13	9	2	**31**
10. Iran-Turanian	14	26	38	36	24	34	38	21	**105**
11. Endemics of Kopet-Dagh and Turkmenistan	5	5	7	10	5	4	7	5	**23**
Subtropical complex									
12. Tropical, subtropical	5	8	3	6	4	5	5	4	**11**
Total	**94**	**150**	**125**	**195**	**94**	**149**	**128**	**94**	**426**

Acknowledgements

The authors would like to express their gratitude to Dr. I. L. Sukhareva (St. Petersburg); Dr. E. M. Antonova and Dr. A. V. Sviridov (Moscow); M. Hreblay, G. Ronkay, L. Ronkay and Dr. Z. Varga (Budapest) for their kind assistance in providing access to the collection materials under their care. We also thank all Moscow amateur lepidopterists whose private collections we have got an opportunity to examine.

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