

THE
PRIMÆVAL WORLD
OF
SWITZERLAND.

WITH
560 ILLUSTRATIONS.

BY
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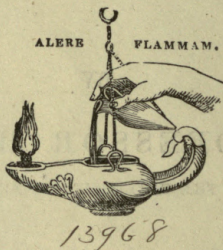
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among the more important groups. The remarkable predominance of the Sternoxi is chiefly produced by the Buprestidæ (gold-beetles), a family which attained a far more important development in the Tertiary fauna than it does at present, and which is now most numerous in warmer zones. Many species of Buprestidæ are found in the Lias, including the great majority of the wood-beetles of that early period (see vol. i. p. 87). The predominance of the Buprestidæ, the abundance of Palpicornes, and the rare occurrence of Brachelytra are the most characteristic features of the Tertiary beetle-fauna.

Ladybirds (Coccinellidæ) are everywhere well-known insects, characterized by the convex form of their body, and generally by their elegantly spotted elytra. From Eningen nineteen species have been received; and of most of these the original colouring is still to be recognized. It was as lively and varied as in living species. In one species (*Coccinella colorata*, fig. 234) four black spots may be observed on the thorax, and ten upon each elytron. One species (*C. Andromeda*, Heer) resembles the common Swiss seven-spotted ladybird; another (*C. Hesione*, Heer) represents the two-spotted species (*C. dispar*, Ill.); and a third (*C. amabilis*, Heer) is like *C. ocellata*, Linn.; whilst a fourth, large species (*C. spectabilis*, Heer, fig. 235) agrees in size and form with the Brazilian *C. marginata*.

Of the Chrysomelinæ (Phytophaga) fifty species are known from Eningen; and to these must be added three more from the Swiss Miocene. The most numerously represented families are the Chrysomelidæ (with fifteen species), the Gallerucidæ (with nine), and the Cassididæ (with eight species). Among the Chrysomelidæ one species (*Lina populeti*, Heer, fig. 237) is very like the Swiss common poplar-beetle (*Lina populi*, Linn., sp.), and probably had also blood-red elytra; another (*Gonioctena Chymene*, Heer) resembles *G. pallida*, Fab., which lives on the black alder and hazel; and a third (*Chrysomela calami*, Heer, fig. 238) is allied to *Chrysomela graminis*, Linn., which is met with on reeds.

Among the Gallerucidæ three species had the head and thorax light-coloured (probably red or yellow during life), and the antennæ and elytra black (probably metallic during life). The largest of these (*Galleruca Buchi*, Heer, fig. 236) is most nearly

related to *G. halensis*, Linn., which lives in Central Europe upon the goose-grass (*Galium*), while the two others resemble Brazilian species, as does also another species, in which the elytra are adorned with large round spots.

The Cassididæ (shield- or tortoise beetles) are easily recognized, even in the fossil state, by their broad flat elytra. The two most abundant species (*Cassida Hermione*, Heer, and *C. Blancheti*, Heer, fig. 239) resemble those which live on thistles (*C.*

Fig. 235. Fig. 236. Fig. 237. Fig. 239. Fig. 241.

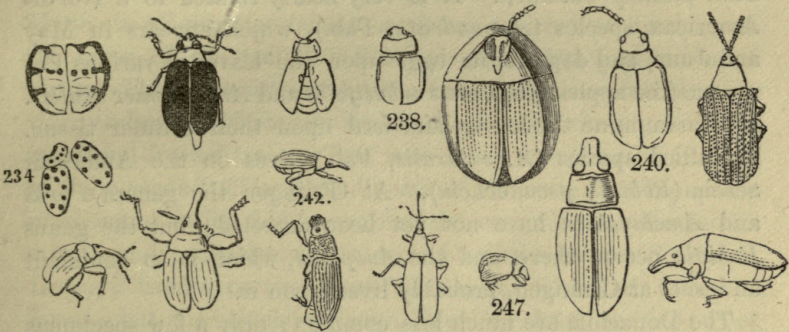


Fig. 243. Fig. 244. Fig. 245. Fig. 246. Fig. 248. Fig. 249.

Fig. 234. *Coccinella colorata*, Heer.

Fig. 235. *Coccinella spectabilis*, Heer.

Fig. 236. *Galleruca Buchi*, Heer, twice nat. size.

Fig. 237. *Lina populeti*, Heer.

Fig. 238. *Chrysomela calami*, Heer.

Fig. 239. *Cassida Blancheti*, Heer, three times nat. size.

Fig. 240. *Lema vetusta*, Heer, twice nat. size.

Fig. 241. *Anoplites Bremii*, Heer, three times nat. size.

Fig. 242. *Apion antiquum*, Heer, three times nat. size.

Fig. 243. *Rhynchites Dionysus*, Heer.

Fig. 244. *Attelabus durus*, Heer.

Fig. 245. *Naupactus crassirostris*, Heer.

Fig. 246. *Anthiarhinites gracilis*, Heer, three times nat. size.

Fig. 247. *Brachycerus nanus*, Heer.

Fig. 248. *Sitona atavina*, Heer, four times nat. size.

Fig. 249. *Cleonus speciosus*, Heer.

Murræa, Fab., and *C. thoracica*, Kug.), and therefore afford evidence of thistles at Eningen.