

Family **Anthophoridæ.***Anthophora* ? sp.

2 ♀♀, 50 miles south of In Eker, 1931.

This species was also obtained by Major H. St. J. B. Philby in S. Arabia in 1931.

Family **Nomiadidæ.***Nomia latipes* Mor.

Morawitz, Bull. Acad. Sc. St. Petersburg, xxvi. p. 368 (1880).

2 ♂♂, 1931.

Type-locality: Transcaspia (Krasnovodsk). This species is distributed over S.W. Asia, Caucasus, and N. Africa.

Family **Xylocopidæ.***Xylocopa* ? sp.

2 ♀♀, 1931; 1 ♂, 1931.

This species was also obtained in S. Arabia by Major H. St. J. B. Philby in 1931.

## VIII.—FORMICIDÆ. By HORACE DONISTHORPE.

Eight species of ants were taken, of which two—the *Monomorium* and the *Acantholepis*—are widely distributed and of no special interest. Of the others, the *Messor* variety is probably confined to this district, the locality for the type-form being Algeria. One of the *Camponotus* forms has been found only in Algeria before, and the other only in Tunisia.

Of the three *Cataglyphis* forms, one is confined to the Sahara, the second occurs in the stony deserts south of the Atlas Mountains, and the third is an inhabitant of deserts in North Africa and Egypt.

Family **Myrmicinæ.***Monomorium (Xeromyrmex) salamonis* L.

Linnaeus, Syst. Nat. ed. 10, i. p. 580 (1758); Er. André, Spec. Hym. Europe, ii. pp. 336, 339, 342, pl. xxii. figs. 1, 2, 3, 4, 10 (1883).

35 ♀♀, Tamsnigat.

Type-locality: Egypt, Arabia, Palestine. Known distribution: Barbary, Syria, C. Asia, the Caucasus, Sudan, etc.

*Messor barbarus* L. subsp. *hoggarensis* Sant., var. ?

Santschi, Bull. Soc. Hist. Nat. Afr. no. xx. p. 98 (1929).

2 ♂♂, 2 winged ♀♀, 2 dealated ♀♀, 25 ♀♀, Tamsnigat.

Type-locality: Algeria. Harvesting ants. *Messor barbarus* L. occurs in Europe, Mediterranean region, etc., and N. Africa. A number of subspecies and varieties have been described from numerous localities.

### Family Formicinae.

*Acantholepis capensis* Mayr.

Mayr, Verh. zool.-bot. Ges. Wien, xii. p. 699 (1862); Forel, Grandidier, Hist. Madagascar, xx. p. 95 (1891).

3 ♀♀, Tamanrasset.

Type-locality: Cape of Good Hope. Known distribution from the Cape to Egyptian Sudan, etc., and a number of subspecies and varieties have been described from different parts of Africa and one from Hindoustan.

*Camponotus (Tanæmyrmex) compressus* F.  
subsp. *thoracicus* var. *spahis* Santschi.

Santschi, Eos, i. p. 357 (1925).

9 ♂♂, 4 winged ♀♀, 10 ♀♀, 10 ♀♀, Tamsagat.

Type-locality: Algeria. *C. compressus* F. occurs in India and Ceylon. Very many subspecies and varieties have been described from many parts of Africa, Palestine, etc.

*Camponotus (Myrmoturba) atlantis* Forel  
var. *planitie* Santschi.

Santschi, Bull. Soc. Ent. Belg. lxxix. p. 159 (1929).

3 ♀♀, Tamsnigat.

Type-locality: Tunisia.

*Cataglyphis (Cataglyphis) bicolor* F.  
subsp. *dielili* Forel.

Forel, Ann. Soc. Ent. Belg. xlvi. p. 156 (1902); Santschi, Rev. Suisse Zool. xxxvi. p. 51 (1929).

5 ♀♀, Tamsnigat.

Type-locality: Biskra. Known distribution: stony deserts south of the Atlas Mountains.

*Cataglyphis (Paraformica) emmæ* Forel  
var. *hoggarensis* Santschi.

Santschi, Rev. Suisse Zool. xxxvi. p. 53 (1929).

11 ♂♂, Tamsnigat.

Type-locality: Tamanrasset. Known distribution: Central Sahara. *C. emmæ* Forel occurs at Biskra.

*Cataglyphis (Machæromyrma) bombycina* Roger.

Roger, Berl. ent. Zeitschr. iii. p. 232 (1859); Er. André (*Myrmecocystus bombycinus*), Spec. Hym. Europe, ii. pp. 168, 171, 175 pl. ix. fig. 4 (1882); Santschi, Rev. Suisse Zool. xxxvi. p. 60 (1929).

2 ♂♂, In Salah, 1 ♀, Fort Miribel.

Type-locality: Egypt. Known distribution: Egypt and the deserts of N. Africa.

XIII.—*Cœlenterates as Enemies of Fishes.*—I. *Hydras and Sessile Colonial Hydroids as Fish-eaters.* By E. W. GUDGER, Bibliographer and Associate in Ichthyology, American Museum of Natural History.

[Plates VII. & VIII.]

INTRODUCTION.

The lower invertebrates are commonly thought of rather as food for fishes than as enemies—and so they are, broadly speaking. However, in the extensive work of collecting materials for a continuation of Dean's 'Bibliography of Fishes,' I have found many accounts of aquatic invertebrates attacking fishes. Since these accounts are mainly embedded in great systematic works and in journals not all easily accessible, it has seemed that it might be worth while to bring the most interesting ones together. However, there is so much of this material that it is necessary to work it up into a number of short articles. In this way, these habits will become known in the literature under the names of the various groups of invertebrates shown to be enemies of fishes.

Among the invertebrates, one would hardly think of the lower Cœlenterates (literally "hollow-bodied" animals) as fish-eaters, since in them there is no body-cavity with a digestive tube suspended in it. This