INSECTES SOCIAUX

BULLETIN DE L'UNION INTERNATIONALE
POUR L'ÉTUDE DES INSECTES SOCIAUX

NOUVELLES DE L'UNION

Tome III — 1956 — N° 4

NOUVELLES DE L'UNION

TRAVAUX PUBLIÉS PAR LES MEMBRES DE L'UNION

MILNE (P. S.). — 1945. **Sulphonamides and American foul brood disease of bees.** (*Nature*, **155**, 335.)

In 1944, Prof. Haseman of the University of Missouri, Columbia, reported that sugar syrup containing sulphathiazole fed to bees enabled them to raise healthy brood in combs containing the "scales" of larvae which had died of American Foul Brood. In 1943 a beekeeper, Mr. Ekins of Surrey, claimed to have obtained similar results with sulphapyridine. Trials, with sulphapyridine for the elimination of A. F. B. from colonies of bees, carried out at Rothamsted in 1944, yielded promising but not conclusive results. It appeared that during the course of treatment, progress of the disease within the colony was arrested, and that only healthy brood was being reared in combs where the disease had previously been established.

MILNE (P. S.). — 1947. **Sulphonamides and A. F. B.** (*Progress Report. Agriculture.*)

Experiments were conducted during 1946 in collaboration with County Beekeeping Instructors and Bee Disease Officers, at a number of centres on the control of American Foul Brood by feeding sulphonamides in sucrose syrup. Promising results were obtained in most instances and of the thirty-two colonies involved in these trials all but three were reported to be free from all visible signs of disease at the end of the season.

Of the three cases in which satisfactory results were not obtained, two failed to respond to treatment and the third colony which was reported to be healthy following treatment showed a recurrence of the disease six weeks later. Further work will have to be done before a satisfactory opinion of the value of this treatment can be given.

NIXON (H. L.), RIBBANDS (C. R.). — 1952. **Food transmission in the honeybee community.** (*Proc. roy. Soc. B.*, **140**, 43-50.)

Six bees were trained to a dish, from which they collected 20 ml. of sugar syrup containing radioactive phosphorus. The distribution of radioactivity among the bees and larvae of their colony of 24,500 adults was then studied.

62 per cent of the foragers and 16-21 per cent of all the bees in the hive were radioactive within 4 hours. 76 per cent of the foragers and 43-60 per cent of all the bees were radioactive within 27 hours. The nurse bees were significantly less radioactive than the house bees and the foragers significantly more so. Within 48 hours all the large larvae in the unsealed cells were radioactive. The results are attributed to widespread food transmission.

It is suggested that food transmission is the foundation of the division of labour within the honeybee community, and of the similar odour produced by the members of each colony which serves for mutual recognition.

Food transmission would enable slow-acting insecticides contained in their food to be widely distributed among the members of a honeybee community.

O'ROURKE (F. J.). — 1940. **Dates for Swarming Ants 1939.** (*Ir. Nat. Jour.*, **7** (**9**), 249.) — 1940. **Notes on the Ant Fauna of Howth, Co. Dublin.** (*Ir. Nat. Jour.*, **7** (**10**), 30.) — 1943. **Early Appearance of Bumble Bees.** (*Ir. Nat. Jour.*, **8** (**4**), 111.) — 1945. **Method used by Wasps of the genus *Vespa* in killing Prey.** (*Ir. Nat. Jour.*, **8**, (**7**), 238-241.) — 1945. **A Further Extension of the Range of *Myrmica schenki*, Emery.** (*Ent. Rec.*, **57** (**7/8**), 85.) — 1946. **The Occurrence of Three Mermithogynes at Roundstone, Connemara, with notes on the Ants of the Area.** (*Ent. Rec.*, **58** (**5**), 65-70.)

This paper records the first cases of infection with the nematode parasite *Mermis* in Irish ants. One *Acanthomyops niger* female and two *L. flavus* females were found infected and are described. Information is given on the ants found in the Roundstone area with particular reference to swarming.

1946. **The Discovery of the Rare Ant Stennamma westwoodi West. in Co. Wicklow.** (*Ir. Nat. Jour.*, **8**, 413.) — 1947. **The Rate of Progression in Ants.** (*Ent. Rec.*, **59** (**1**), 2-3.)

The time taken by females and workers of the species *Tetramorium caespitum* in covering 50 cms is recorded. It is noted that, while there is little variation between the speeds of the females, there is a marked difference between the speeds shown by different workers, the speed of the fastest being almost twice that of the slowest. The relationship between this finding and Chen's report on leaders and followers among ants is discussed.

1947. *Lasius spp.* **Swarming at Cambridge.** (*Ent. Mon. Mag.*, **83** (**2**), 41.)

On August 4th, 1946, at Parker's Piece, Cambridge, swarming began at 2.20 p.m. (G. M. T.) at 67° F. with a barometric pressure of 29.60 inches. Males constituted 90 % of the swarm at 2.20 p.m. but by 6.00 p.m. the swarm was almost entirely dealated females, at a density of 4 per sq. yard. Of the 38 females taken, 24 were *L. niger*, 14 were *L. flavus*.

1947. **The Climbing rate of the Ant** *F. rufa* **in Switzerland.** (*Ent. Rec.*, **59**, 115-116.) —

1948. **A** *Lasius mixtus* **Nyl. Pterergate from Co. Wicklow.** (*Ent. Mon. Mag.*, **84**, 8-9.)

The twentieth known Pterergate is described from a specimen collected at Glenmalure, Co. Wicklow, on August 11th, 1945, by Mr. D. P. Walls. A figure is given of this species and the previous literature is reviewed.

1949. **Some Ant Swarming Records from Co. Dublin.** (*Ent. Rec.*, **61**, 63-65.)

Attention is drawn to how little information is available concerning the swarming habits of the ants of these islands. Information is given concerning the swarming of *Myrmica rubra*, *Lasius flavus* and *L. niger* in Co. Dublin.

1950. **The Isopod** *Platyarthrus hoffmanseggi* **Brandt and its relation to Ants.** (*Ent. Rec.*, **61**, 63-65.)

Brook's work on the behaviour of the Isopod *Platyarthrus hoffmanseggi* in a gradient of formic acid is confirmed and illustrated by a figure. It is shown that Brook's theory, that the isopod is attracted to ants' nests by the odour of formic acid, is untenable. It is suggested that the preference shown by the isopod for the odour of formic acid is a persistence of an adaptation to the odour of *Formicine* ants to whose nests it originally came as an inquiline. A first it was limited to *Formicine* nests, but at a later stage of its evolution developed its panmyrmecophilous habits. It is, therefore, of great interest that the original adaptation should persist in specimens taken from both *Myrmicine* and *Formicine* (formic acid secreting) nests on both sides of the Atlantic.

1950. **The Distribution and General Ecology of the Irish Formicidae.** (*Proc. R. Ir. Acad. B*, **52**, 383-410.)

This paper is an attempt to give a complete account of the information available on the Irish ants to the year 1947. The species found in Ireland are listed together with information on their vice comital distribution, ecology and swarming habits. A key is given which enables the workers and queens of all native species to be identified. The paper is illustrated by a series of eight map graphs, indicating the distribution of the rarer species.

1950. **Ants as Beneficial Insects.** (*Proc. IX Inter. Cong. Ent. Stockholm*, 941-5.)

1950. **Formic Acid Production in Ants.** (*Ann. Ent. Soc. Amer.*, **43**, 437-443.)

Previous work on formic acid production in ants is reviewed. It is shown that there is little evidence that the acid is found in ants outside the sub-family Formicinae. The results of formic acid estimations on living ants are given and they are shown to be lower than those previously recorded. It is suggested that this may be because no blank estimations were made by previous workers, and also that they used dead specimens. An unsuccessful attempt to produce a reliable method of formic acid estimation on a micro-diffusion basis is described. A qualitative colormetric method is described which will detect as little as 50 γ of formic acid. It did not prove to be successful as a quantitative method. Four possible modes of formic acid synthesis in the ant are suggested and discussed.

1950. **Myrmecological Notes from Narvik, Northern Norway.** (*Tromso, Museums Arshefter*, **8**, 47-50.)

Six species of ants were found in a few hours collecting at Narvik, Nnø division of Nordland, Norway, where hitherto only two species had been found. Those not previously recorded from Nnø are *Myrmica rubra, M. laevinodis, M. sulcinodis* and *Formica fusca*. An account is given of a swarm of *M. rubra*.

1952. **A Preliminary Ecological Classification of Ant Communities in Ireland.** (*Ent. Gaz.*, **3**, 69-72.)

Three main ecological communities may be recognized in Ireland, (*a*) low soil humidity fauna; (*b*) medium soil humidity fauna; (*c*) high soil humidity fauna. The species characteristic of these different ant faunas are described. The physiological basis of the distribution of the various species is discussed.

1953. **Stung by 100 Yellow Jackets.** (*J. Amer. Med. Assoc.*, **151**, 878.)

1954. **The Brown Trout** (*Salmo trutta* L.) **Feeding on Ants.** (*Entomol. Gazette*, **5**, 48-51.)

A collection of nearly 800 trout stomachs were examined from the river Liffey. One hundred and sixty ants were found in thirty four of these stomachs. In six of thirty four stomachs, ants formed the dominant food. The importance of examining fish stomachs from areas in which the ant fauna is unknown is indicated by the fact that of the 15 species known to occur in the counties within the Liffey River basin, no fewer than six species were found in the stomachs. Since three or four of the fifteen species are very rare, one may say that nearly half the ant species in the area occurred in a sample of about 800 trout stomachs. This shows that the examination of freshwater fish stomachs (especially if taken during the swarming season) might throw considerable light on the ant fauna of areas from which specimens might not otherwise be available.

Ribbands (C. R.). — 1949. **The foraging methods of individual honeybees.** (*J. Anim. Ecol.*, **18**, 47-66.)

The movements of individually marked foragers were recorded from day to day, and a few selected bees were watched continuously for periods of a day or more. The following conclusions have been drawn:

(*a*) The basic principle underlying the foraging behaviour pattern is the exhibition of trial and error learning of considerable complexity. The honeybee continuously chooses the best of any alternative crops with which she becomes acquainted, and compares present crops with her memory of past crops.

(*b*) A bee usually attaches herself to a particular area of the most profitable crop found. The size of this foraging area varies considerably.

(*c*) Honeybees may use choice and memory in order to select the most suitable blossoms of the crop they are working, in order gradually to change the position of the foraging area, when working two crops at once or when working one crop and inspecting another, when working two crops at different times of the day, when crops are failing, and when changing crops. Some foragers exhibit a centripetal tendency which is considered to be a consequence of the interplay between choice and memory.

(*d*) Attachment to a particular crop may be of any duration, from a few visits to a lifetime. The proportion of changes of attachment varies greatly with local circumstances, since behaviour is very liable and readily adaptable to changing conditions,

RIBBANDS (C. R.). — 1950. **Autumn feeding of honeybee colonies.** (*Bee World*, **31**. 74-76.)

Concentrated (66 per cent) sugar syrup, fed to colonies of honeybees in autumn, results in the production of about one-third more ripe stores than does the same weight of sugar fed as dilute (38 per cent) syrup.

The elimination by the bees of each 1 lb. of surplus water from the syrup involved the utilisation of 4-5 oz. of the syrup. This wastage of syrup was not due to brood rearing, which was less when dilute syrup was fed. About 10 per cent more ripe stores resulted from the feeding of concentrated syrup in mid-September than from the feeding of the same amount in August.

RIBBANDS (C. R.). — 1950. **Changes in the behaviour of honeybees following their recovery from anaesthesia.** (*J. Exp. Biol.*, **27**, 302-310.)

Anaesthesia with chloroform had no effect upon the memory, subsequent foraging behaviour, or longevity of worker honeybees. Anaesthesia with carbon dioxide did not impair the memory but induced a permanent change in the behaviour of worker honeybees, thus the pollen collecting tendencies of bees so treated were either eliminated or markedly reduced. The treatment of newly emerged worker bees with carbon dioxide resulted in a reduction in their brood rearing and wax secreting activities, and caused them to commence to forage at an early age. The treatment had no direct effect upon the longevity of the bees concerned.

The effects of nitrogen anaesthesia were similar to those of carbon dioxide. The factor common to both these treatments is lack of oxygen

RIBBANDS (C. R.). — 1951. **The flight range of the honeybee.** (*J. Anim. Ecol.*, **20**, 220-226.)

The gains in weight of groups of colonies sited on the edges of crops were compared with those of groups of colonies sited $\frac{3}{8}$ and $\frac{3}{4}$ mile away from the same crops.

The chief crops chosen were apple, lime and heather; the experiments were repeated in two successive years. The effect of increased flying distance was large, and increasingly detrimental, but the magnitude of the effect varied considerably. Most of the effect was a consequence of unfavourable weather. The result illustrates a disadvantage of placing large numbers of colonies in one apiary.

RIBBANDS (C. R.). — 1952. **Division of labour in the honeybee community.** (*Proc. R. Soc. B.*, **140**, 32-43.)

Newly emerged bees in a colony were individually marked and their foraging activities were studied by subsequent observations at the hive entrance.

A few individuals gathered pollen throughout their foraging lives; many gathered none at all. Most gathered pollen at some time, but there was great diversity in the part of the foraging life at which this occurred.

There was considerable variation in the age at which different bees, emerging on the same day and living in the same colony, commenced foraging; this age ranged from 9-35 days. This variation was produced not only by alteration of the duration of the various hive duties, but also by omission of some of them. Such variation indicates that the division of labour is not determined by the age of the available workers, but is controlled by the requirements of the colony, the ages of the bees playing a subsidiary rôle.

The requirements of the colony are determined by its food supply and they are appreciated by the individual as a consequence of widespread food transmission. Food transmission is, therefore, the most primitive and important method of communication in the honeybee colony.

RIBBANDS (C. R.). — 1952. **The relation between the foraging range of honeybees and their honey production.** (*Bee World*, **33**, 2.)

The gains in weight of groups of colonies sited on the edges of crops were compared with those of groups of colonies sited $\frac{3}{8}$ and $\frac{3}{4}$ mile away from the same crops. The experiments were repeated in two successive years. The effect of increased flying distance was large and detrimental, but its magnitude varied considerably. Most of the effect was due to weather conditions.

The results emphasize the importance of foraging range, and demonstrate how slight differences in apiary position or weather may cause the complete loss of a honey crop. They illustrate the advantages of moving colonies of bees to suitable crops and of using small apiaries.

RIBBANDS (C. R.). — 1952. **The inability of honeybees to communicate colours.** (*Brit. J. anim. Behav.*, **1**, 5-6.)

Experiments determined that dancing foragers which can communicate the scent and whereabouts of a crop to other members of their colony do not convey any information concerning the colour of the flowers of the crop.

RIBBANDS (C. R.), KALMUS (H.), NIXON (H. L.). — 1952. **New evidence of communication in the honeybee colony.** (*Nature Lond.*, **170**, 438. Reprinted in *Bee World*, **33**.)

An article based upon the three papers summarized above and published in *Proc. Roy. Soc. B.*, **140**, 32.

RIBBANDS (C. R.). — 1953. **The behaviour and social life of honeybees.** (*Book-London: Bee Research Association Ltd.*)

RIBBANDS (C. R.), SPEIRS (N.). — 1953. **The adaptability of the homecoming honeybee.** (*Brit. J. anim. Behav.*, **1**, 59.)

Groups of foraging bees of known ages were marked individually and introduced to a colony of bees. One to five days later the broodchamber housing this colony was turned through 90° and changed in height. Two days later it was turned through a further 90° and its height was changed again. The marked bees reorientated quickly and completely in these experiments, and their age had no effect upon their adaptability. Colony odour facilitated reorientation.

RIBBANDS (C. R.). — 1954. **Nitrous oxide anaesthesia does not encourage reorientation of honeybees.** (*Bee World*, **35**, 91.)

Fully controlled experiments showed that anaesthesia with either "ammonium nitrate fumes" or nitrous oxide had no effect on orientation. After carbon dioxide anaesthesia *more* bees returned to their original home. All the foragers from a nucleus

which is taken from and placed near to its parent colony are likely to return to the latter, whether they have been anaesthetized or not; a variable proportion of the nucleus will consist of non-foragers, who are likely to remain in it.

RIBBANDS (C. R.). — 1954. **The defence of the honeybee community.** (*Proc. Roy. Soc. B.*, **142**, 154.)

Pairs of colonies of differently coloured bees were placed with their entrances only 2 inches apart, and many bees tried to join the wrong colony, as if it were their own. Strangers were recognised by their different scent, and their reception varied according to foraging conditions. During "nectar flows" there was no hostility, and the bees of both colonies mingled indiscriminately. In fairly good conditions there was no hostility, but partial separation was maintained through the discrimination shown by incoming foragers. In dearth conditions, when bees try to rob other colonies, all-strangers were received with hostility; most were thrown out, and many were killed. In dearth conditions marked foragers from one of the two colonies were fed with sugar syrup, but they were nevertheless repelled when they tried to enter the hive of the unfed colony; on the other hand, unfed strangers were more readily admitted into the fed colony. Thus hostility to strangers increased when forage was scarce; the condition of the community whose hive was to be entered was important, but the carriage of food by the intruder was not. These results are discussed in relation to defence of the community against both robber bees and strange queens.

RYLE (M.). — 1954. **The influence of nitrate, phosphate and potash on the secretion of nectar. Parts I and II.** (*J. agric. Sci.*, **44** (**4**), 400-19.)

These two papers describe the results of work on the effect of fertilizer treatment on nectar secretion in mustard, buckwheat, apple and red clover. It has been shown that in the case of apple-trees the mean quantity of sugar produced per flower can be significantly increased by extra potash. In experiments with the other plants mentioned it was found that any treatment which checked growth at flowering time, apart from a shortage of potash, increased the yield of nectar.

SIMPSON (J.). — 1948. **A Hornet's Nest.** (*Ent. Mon. Mag.*, **84**, 128-129.)

A description of the structure, and composition of the population throughout its existence, of a hornets' nest.

SIMPSON (J.). — 1949. **Humidity in the winter cluster of a colony of honeybees.** (*Bee World*, **31** (**6**), 41-43.)

Outside weather conditions have little effect on the humidity within a winter cluster at moderate winter temperatures. High external humidities can only affect the colony by causing water vapour discharged from the cluster to condense within the hive.

The atmosphere in a cluster containing brood has a lower saturation deficiency than that found in the same cluster without brood. The absolute humidity of the atmosphere varies from point to point in the cluster, and in general follows the temperature in such a way that throughout much of the cluster the saturation deficiency only varies within small limits.

SIMPSON (J.). — 1952. **The composition of the stores produced by bees from sugar syrup.** (*Bee World*, **33**, 112.)

The water content of stores derived from sucrose syrup was normal but the sucrose content was much higher than that of normal honey and was greater when the stores were produced from concentrated syrup than from dilute. The extent to which honey granulates is diminished by raising its sucrose content to that of stores derived from sucrose syrup. Although bees can effectively ingest *finely* granulated honey, granulation is in general undesirable, thus the presence of sucrose in syrup stores is probably beneficial.

SIMPSON (J.). — 1954. **Effects of some anaesthetics on honeybees: nitrous oxide, carbon dioxide, ammonium nitrate smoker fumes** (*Bee World*, **33**, 149.)

Worker honeybees were apparently unaffected by atmospheric oxygen concentrations between 7 and 100 per cent, and only became motionless when the oxygen concentration was less than 2 per cent. The effects of nitrous oxide-oxygen mixtures differed little, if at all, from those of nitrogen-oxygen mixtures. Bees were not visibly affected by carbon dioxide concentrations up to 10-15 per cent, but became motionless if the concentration exceeded 40-45 per cent.

Fumes produced by adding ammonium nitrate to the burning fuel in a beekeeper's smoker were found to contain hydrogen cyanide or cyanogen. Their effectiveness as an anaesthetic may be due to this or to some unidentified component, but not to nitrous oxide. All these anaesthetics caused foraging bees to stop collecting pollen and accelerated the retrogression of the pharyngeal glands of young bees. The conclusion is reached that these anaesthetics do not encourage reorientation to a new hive site.

SKAIFE (S. H.). — 1953. **Sub-social Bees of the Genus Allodape Lep. et Serv.** (*J. Ent. Soc. S. Africa*, **16** (1).)

This deals with the life history and habits of *Allodape angulata* Brauns, *A. abdominalis* Friese and *A. halictoides* Skaife.

1954. **The Black Mound Termite of the Cape, Amitermes atlanticus Fuller.** (*Trans. Roy. Soc. S. Africa*, **34** (1).)

Methods of study, annual cycle and habits of *A. atlanticus*.

1954. **Caste differentiation among termites.** (*Trans. Roy. S. Africa*, **34** (2).)

Methods of study and conclusions concerning caste differentiation in *Amitermes atlanticus*.

1954. **The Food the Black Mound Termite of the Cape. Amitermes.** (*J. Ent. Soc. S. Africa*, **17** (1).)

Methods of study and details of feeding habits of *A. atlanticus*.

1955. **The Argentine Ant.** *Iridomyrmex humilis Mayr.* (*Presidential Address. Trans. Roy. Soc. S. Africa*, **34** (3).)

A new method of keeping these ants in the lab. is described and then the habits, life history and annual cycle under South African conditions are dealt with. Methods of control are compared.

1955. **Dwellers in Darkness. An introduction to the study of termites.** (*Longmans Green and Co. London.*)

An account in plain, everyday language of the results of twenty years' investigations of *Amitermes atlanticus*.

SYNGE (A. D.). — 1947. **Pollen collection by honeybees.** (*J. anim. Ecol.*, **16**, 122-38.)

Pollen collected daily from colonies of bees by means of pollen traps was analysed. Almost 50 per cent of the pollen collected in Harpenden during the season was found to come from the clovers. A correlation between the number of loads of Red Clover pollen gathered by the bees and the daily maximum temperature was found, and this was shown to be due mainly to the increased number of red clover flowers opening at the higher temperatures. The floral mechanism making pollen available to the bee was investigated for a number of flowers including red and white clovers, *Vicia faba*, *Papaver rhoeas*, *Epilobium augustifolium* and *Brassica alba*.

Large differences in the amounts of pollen gathered from different plant species were found between two neighbouring colonies in the same apiary.

LE CONGRÈS D'ENTOMOLOGIE DE MONTRÉAL

Qu'il soit permis au Secrétaire de l'Union, avant tout compte rendu, de remercier chaleureusement les organisateurs du X^e^ Congrès International d'Entomologie, qui ont bien voulu réserver une vie officielle à l'U. I. E. I. S. dans le cadre du Congrès. Cette vie s'est manifestée par de nombreuses prises de contact personnelles, ainsi que par la tenue de 4 symposia et d'une assemblée générale.

L'ensemble de ces manifestations a permis de mieux mesurer le chemin parcouru depuis le IV^e^ Congrès d'Entomologie d'Amsterdam, où l'idée de l'Union a pris corps.

Vie des Sections.

— Beaucoup de membres nord-américains de l'Union étaient présents et les 3 symposia organisés par leur section connurent un grand succès. Seule l'absence du Professeur SCHNEIRLA, retenu par son travail sur le terrain, fut regrettée de tous.

— Les sections sud-américaines, représentées par le Père J. S. MOURE, ont fait part des difficultés qu'elles rencontrent pour acquitter légalement leurs cotisations.

— Les sections européennes étaient moins bien représentées que les sections américaines ; l'absence de membres allemands et italiens de l'Union a été vivement regrettée.

— Une section nouvelle est née au cours du Congrès, et tous les membres de l'Union s'en féliciteront : c'est la section soviétique. Trois membres ont été inscrits officiellement : MM. STEINBERG, MONTCHADSKY, POPOV (Zoological Institute, Academy of Sciences of the U. S. S. R., Leningrad 164, U. S. S. R.). M. STEINBERG s'occupe de l'organisation de la nouvelle section ; il espère que plusieurs collègues soviétiques participeront à notre prochain Congrès.

— M. BAETA NEVES (Institut Supérieur d'Agronomie Tapeda de Ajuda, Lisbonne, Portugal) a accepté de centraliser, pour le Portugal, toutes les informations concernant l'Union, mais peu de Portugais s'intéressent aux Insectes Sociaux.

— M. A. P. KAPUR [Entomology section Zoological Survey of India (Indian Museum), Calcutt 12, India] a promis de proposer à ses collègues la création d'une section pour l'Inde.

SYMPOSIA.

I. — **Symposia organisés par le Congrès et la Section nord-américaine de l'U. I. E. I. S. (Evolution of social life in Insects).**

Trois demi-journées ont été consacrées à ces symposia ; les communications suivantes ont été lues :

HARRIS (W. V.). — *Colony formation in the Isoptera.*
MICHENER (C. D.). — *Evolution of social behavior in bees.*
EVANS (H. E.). — *Evolution of social life in wasps.*
WEBER (N. E.). — *Social evolution in ants with particular reference to fungus growing patterns.*
TREAT (A. E.). — *Social organisation in the moth ear mite* Myrmonyssus phalaenodectes.
MOURE (J. S.), PAULO NOGUEIRA-NETO, KERR (W. E.). — *Behaviour of social bees, principally Meliponinae.*
FLANDERS (S. E.). — *The regulation of caste ratios in the social hymenoptera.*
BRIAN (M. V.). — *The evolution of queen control.*
LE MASNE (G.). — *Recherches sur les Fourmis parasites : un cas de parasitisme social double.*
EISNER (T.), BROWN (W. L., Jr.). — *Food transmission and the evolution of ants.* I. *The proventriculus.*
WILSON (E. O.), EISNER (T.). — *Food transmission and the evolution of ants.* II. *Radioactive tracer studies.*

II. — **Symposium organisé par le Congrès et les sections européennes de l'U. I. E. I. S. (Les constructions sociales chez les Insectes).**

Ce symposium a duré une demi-journée ; les communications suivantes ont été lues :

GRASSÉ (P. P.), NOIROT (Ch.). — *La construction chez les Macrotermitinæ (Termites champignonnistes).*
LEDOUX (A.). — *La construction du nid chez quelques Fourmis arboricoles de France et d'Afrique tropicale.*
DARCHEN (R.). — *La régulation des constructions chez l'Abeille* Apis mellifica.
BRIAN (M. V.). — *The nests of some British ants.*
RICHARDS (O. W.). — *The nests of South american wasps.*

Assemblée générale.

Une assemblée générale des membres de l'U. I. E. I. S. présents au Congrès de Montréal s'est tenue le jeudi 23 août, à 9 heures, sous la présidence de M. Pierre P. Grassé.

Ordre du jour : Fixation de la date du Congrès de 1957.

M. Grassé expose les raisons qui ont amené la Commission française d'Organisation à choisir les dates du 9 au 13 juillet 1957 pour la tenue du Congrès :

— Facilités de séjour tant à Paris qu'en province (excursion après le Congrès) plus grandes à cette époque de l'année.

— La faune entomologique rencontrée au cours des excursions est plus abondante et variée qu'au mois d'août.

— Cette période est plus favorable à la participation d'un grand nombre de collègues américains, britanniques et français.

Cependant, M. le Professeur Gösswald avait demandé par lettre à M. Grassé de retarder le Congrès d'une quinzaine de jours, ce qui faciliterait les déplacements des collègues allemands.

Une discussion s'ouvre après cet exposé de faits :

M. Michener pense que les Américains seront relativement peu nombreux au Congrès ; le problème des dates concerne donc surtout les Européens. Toutefois, les mois de juin, juillet, août et septembre sont favorables aux déplacements des collègues nord-américains.

Le Père Moure pense que le mois de juillet est le meilleur moment pour les collègues sud-américains.

M. Steinberg, représentant la nouvelle section soviétique de l'Union, pense que les mois de juillet et d'août conviennent à tous ses collègues.

M. Herring, appelé avec voix consultative pour représenter les entomologistes allemands en l'absence de membres de la section allemande de l'Union, pense que les difficultés de ses collègues ne sont pas insurmontables et que les raisons exposées par M. Grassé sont déterminantes.

M. Harris donne l'accord des collègues britanniques pour les dates proposées et suggère que l'assemblée les accepte sans discuter plus longuement, car les dates d'un Congrès International ne peuvent jamais satisfaire tout le monde.

L'assemblée adopte alors à l'unanimité les dates proposées par le Comité d'Organisation français : *le Congrès se tiendra à Paris du 9 au 13 juillet 1957 et sera suivi d'une excursion dans le Sud-Ouest de la France, qui durera environ six jours.*

INTERNATIONAL UNION FOR THE STUDY OF SOCIAL INSECTS NORTH AMERICAN SECTION

Two symposia on the social insects to be sponsored at the 1956 annual meeting of the American Assoc. for the Advancement of Science, to be held in New York City, Dec. 26-30, 1956.

Wed., Dec. 26, 2:00 p.m. ; Penn Top, Hotel Statler.

Symposium I. — Communication in Insects : Perspective on Fact and Theory (arr. by T. C. Schneirla).

William S. Creighton, *City College of New York, Presiding.*

1. Communicative Dancing by Insects. Vincent G. Dethier, Johns Hopkins University. (Lantern, 30 min.)
2. Insect Communication by the Medium of Food Distribution. Edward O. Wilson, Harvard University. (Lantern, 20 min.)
3. Mechanisms of Communication in Ants. Arthur C. Cole, University of Tennessee. (Lantern, 30 min.)
4. Contrasting Patterns in Ants, and Theoretical Remarks. T. C. Schneirla, American Museum of Natural History. (Lantern, 30 min.)

Discussants : J. A. Downes, Science Service, Division of Entomology, Ottawa, Canada ;
Neal A. Weber, Swarthmore College ;
John B. Calhoun, National Institute of Mental Health.

Thursday., Dec. 27, 9:00 a.m. ; West Room, Hotel Statler.

Symposium II. — Communication in Insects : Problems and Methods (arr. by T. C. Schneirla).

Kenneth D. Roeder, *Tufts University, Presiding.*

1. Chemoreceptive Mechanisms. Edward S. Hodgson, Columbia University. (Lantern, 30 min.)
2. Sensory Factors in the Orientation of Moths. Ilse Schwinck, New York University, College of Medicine. (Lantern, 30 min.)

3. Phonoreception. Asher E. TREAT, City College of New York. (Lantern, 30 min.)
4. Steering Mechanisms. Horst MITTELSTAEDT, Max-Planck Institut, Wilhelmshaven. (Lantern, 30 min.)

Discussant : William Van der KLOOT, Harvard University ; Talbot WATERMAN, Yale University.

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Published in France. *Le Gérant:* Georges MASSON.

Dépôt légal 1956 - 4e trimestre - N° d'ordre : 7589 - MASSON et Cie, éditeurs, Paris.

Imprimé par l'Imp. Crété Paris, Corbeil-Essonnes.
Dépôt légal 1956 - 4e trimestre - N° d'ordre 7589.