

DESCRIPTION OF NEW SPECIES OF TERMITES
(INSECTA, ISOPTERA) FROM IRAQ

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ABSTRACT

Two species of termites are described as new to science from Iraq :
Amitermes corpulentus sp. n. and *Anacanthotermes sawensis* sp. n., with
two figures.

INTRODUCTION

This is the first part of our work on Iraqi termites which has been
carried out in Iraq during 1984—1986.

This part present a description of two new species belonging to the families
Termitidae and Hodotermitidae.

Family Termitidae

Amitermes corpulentus, sp. nov.

Soldier (Fig. 1) :

Head chrome-yellow, mandibles brown with yellow base, antennae,
pronotum pale ochraceous, mesonotum, metanotum, and legs pale-yellow;
abdomen transparent. Head sparsely and body densely, hairy.

Head nearly rectangular, posterior margin some times evenly rounded, sides
converging in frons; eyes and ocelli wanting; antennae with 15 segments
pilose, basal segment largest, third segment much shorter than rest, last
three segments elongate, terminal segment conical; mandibles sickle-shaped,
distinctly curved, slender, sharply pointed at tips, each with similar pointed
tooth projecting downward from inner margin at approximately half way
from tip to base of mandible; nearly 5 : 8 as long as head: epicrinal suture

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indistinct, fontanelle lying below frontal projection; clypeus with two distinct, pale white lobes; labrum short, broad, tongue-shaped.

Pronotum saddle-shaped, usually more than half as wide as head; apical tibial spurs 3 : 2 : 2.

Measurements (in mm.) of six soldiers.

	Range	Mean	Holotype
Length of head with mandibles	2.30—2.60	2.48	2.50
Length of head to Lateral base of mandibles	1.50—1.75	1.61	1.60
Width of head	1.45—1.55	1.50	1.50
Length of left mandible	0.80—1.00	0.88	0.80
Length of postmentum	0.85—1.10	0.98	1.00
Width of postmentum	0.40—0.50	0.46	0.45
Width of postmentum (at waist)	0.25—0.30	0.28	0.30
Length of pronotum	0.40—0.45	0.41	0.40
Width of pronotum	0.80—0.85	0.83	0.80
Length of hind tibia	1.20—1.35	1.10	1.25

Workers :

Head and antennae pale yellow; mandibles brown; postclypeus pale brown, abdomen transparent.

Head oval, pilose; postclypeus dome-shaped, with longitudinal shallow groove at middle; antenna with 15 segments; terminal segment conical in shape; apical tibial spurs 3 : 2 : 2 .

Measurements (in mm) of seven workers.

	Range	Mean
Total body-length	5.10—6.00	5.59
Head-length to tip of labrum	1.40—1.50	1.46
Width of head	1.20—1.25	1.24
Length of postclypeus	0.20—0.40	0.29
Width of hind tibia	0.90—1.15	1.04

The soldier of *A. corpulentus* is close to that of *A. gallagheri* Chhotani (personal communication with Chhotani, 1989) in size and shape of head but differs from it for having longer and thinner mandibles and sharper and backwardly projecting tooth on each mandible.

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It is also resembling *A. vilis* (Hagen) and *A. messinae* Fuller but differs from them by the following characters :

Head capsul larger; number of antennal segments more, second segment smaller than third and fourth combined, fifth shorter than third and fourth, and both nearly equal to second segment; mandibles slender and more curved than in *A. vilis* and less curved than in *A. messinae*; middle marginal tooth pointed; apical tibial spurs 3 : 2; 2; pronotum usually larger than in *A. messinae*. For comparison, Harris, (1957) and Sands, (1959) were consulted. From the remaining species of the middle east it differs for its rounded head and more convex sides (Personal communication with Chhotani, 1989).

Material examined : Iraq . Arbil, Salahdden, Hejran, Ainkawa.

Holotype : Soldier, in spirit, in a vial collected on 16. vi. 1984 at Salahdden, Coll. S. A. Al-Alawy.

Morphotype : One worker, other data as in holotype.

Paratype : 14 soldiers, other data as in holotype.

Paramorphotype : (299 workers), other data as in holotype.

All these types are deposited in Iraq Natural History Museum, Baghdad except three soldiers and five workers are deposited in Zoological survey of India, culcutta, and two soldiers and ten workers are deposited in British Museum of Natural History.

Family : Hodotermitidae

Anacanthotermes sawensis sp. nov.

Soldier (Fig. 2) :

Head dark yellow, brownish at base of mandibles; labrum and antennae, pale yellow; thorax glossy yellow; abdomen chrome-yellow.

Head subrectangular, lateral sides slightly curved. Y-suture present; labrum densely pilose, wider than long; with lateral sides curved; mandibles slightly curved, saber-shaped, left somewhat larger than right, both fairly straight on outer margins, little curved on tips; left mandible with two pointed marginal teeth, projecting slightly upward from inner margin and the right mandible with first marginal tooth triangular, with less pointed tip, second blunt; antennae with 21—24 segments, second segment larger than third; ten terminal segments oval; eyes small, faceted, D-shaped; ocelli

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spot-like, small oval, not very distinct; **postmentum club-shaped.**

Pronotum saddle-shaped, broad, with anterior part up-turned and posterior part flat. anterior margin with small notch at middle, strongly projecting forward apical tibial spurs 3:4:4; abdomen oblong, fairly pilose.

Measurements (in mm) of four soldiers.

	Range	Mean	Holotype
Length of head with mandibles.	4.20—4.80	4.43	4.40
Length of head to lateral base of mandibles.	2.45—2.70	2.59	2.55
Width of head	2.20—2.50	2.35	2.30
Length of left mandibles	1.65—1.85	1.84	1.75
Maximum diameter of eye	0.20—0.25	0.23	0.20
Minimum diameter of eye	0.15	0.15	0.15
Length of labrum	0.25—0.35	0.29	0.30
Width of labrum	0.65—0.70	0.68	0.70
Length of postmentum	1.30—1.70	1.53	1.50
Width of postmentum	0.75—0.95	0.84	0.85
Width of postmentum (at waist)	0.50—0.60	0.55	0.55
Length of pronotum	1.0—1.10	1.05	1.00
Width of pronotum	1.50—1.70	1.63	1.60
Length of hind tibia	1.70—2.10	1.98	2.00

Workers :

Body yellowish-brown in general coloration, unevenly pigmented.

Head oval, widest at eyes; epicranial suture indistinct; eyes small, black, faceted; antennae with 22—25 segments, third or fourth segment smallest. Pronotum saddle-shaped with projecting corners, posterior part narrow flatly curved backward.

Measurements (in mm.) of seven workers.

	Range	Mean
Total body-length	6.80—10.00	8.13
Length of head to tip of mandibles	2.00—3.70	2.63
Width of head	1.70—3.10	2.20
Maximum diameter of eye	0.25—0.30	0.26

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	Range	Mean
Minimum diameter of eye	0.15—0.20	0.17
Length of anteclypeus	0.25—0.40	0.34
Width of anteclypeus	0.80—1.50	1.04
Length of hind tibia	1.70—2.50	2.01

The soldier of *A. sawensis* is close to that of *A. ubachi* but differs from it for having smaller size and paler colour; and by absence of tubercle on the base of the right mandible, and oval shaped ten terminal segments of antennae. For comparison reference was made to Harris, (1957) and Weidner. (1960). It comes within the size range of *A. vagans* but has comparatively longer and thinner mandibles as compared to head; the postmentum is strongly incurved at waist (weakly incurved in *vagans*); and the 1st tooth of left mandible is more backwardly placed; pronotum being smaller. From *ochraceus* and *saudiensis* it differs for fewer antennal segments (23 vs 26—27 in *ochraceus* and *saudiensis*). The worker major is larger than that of *ubachi* but is close to that of *vagans* in size (personal communication with Chhotani, 1989).

Material examined : Iraq : Al-Mothana (Smawa) near Sawa lake.

Holotype : the holotype soldier kept in spirit, in vial, collected by S. A. Al-Alawy on 27—iv—1986, from sandy soil near Sawa Lake.

Morphotype : One worker, in kept in spirit, in vial; other data as in holotype.

Paratype : 9 soldiers, kept in spirit, in a vial, other data as in holotype.

Paramorphotype : 39 workers, kept in spirit, in a vial; other data as in holotype.

All type specimens are deposited in Iraq Natural History Museum, Baghdad, except one soldier and five workers are deposited in Zoological survey of India, Calcutta.

ACKNOWLEDGMENTS

We should like to express our thanks to Dr. D. B. Chhotani of the Zoological Survey of India for his kind confirmation of the new species and for reading and editing the manuscript. Also we should like to thank Dr. S. Bacchus of Tropical Development and Research Institute, U.K. for confirming the genera and some species. Finally we wish to thank Dr. H. Weidner of Hamburg, Germany for his valuable comments, and Prof. Dr. H. A. Ali of Iraq Natural History Museum for providing space and working facilities for this study, and his kind confirmation of the new species names.

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Fig. 1 — *Amitermes corpulentus* sp. n. Soldier (A).

head and pronotum; (B) postmentum; (C) antenna.

Comparison of *corpulentus* (i) with *miessina* (ii) and *villis* (iii), (D) Left mandible. Worker (E) left mandible.

Fig. 2. — *Anacanthotermes sawensis* sp. n. Soldier

(A) Head and pronotum; (B) postmentum. Comparison of *sawensis*

(i) with *ubachi* (ii), (C) antenna. and with *vagans* (iii),

(D) mandibles. Worker (E) Left mandible.

Bull. Iraq nat. Hist. Mus.

(1990) 8 (3) : 25—33

وصف أنواع جديدة من الأرضة في العراق
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المستخلص

وصفت نوعين من الأرضة ، جديدة للعلم في العراق وهي

Amitermes corpulentus sp. n.

Anacanthotermes sawensis sp. n.

طليبات خشبية الاجنحة على خنافس البقول في العراق مع وصف نوع جديد

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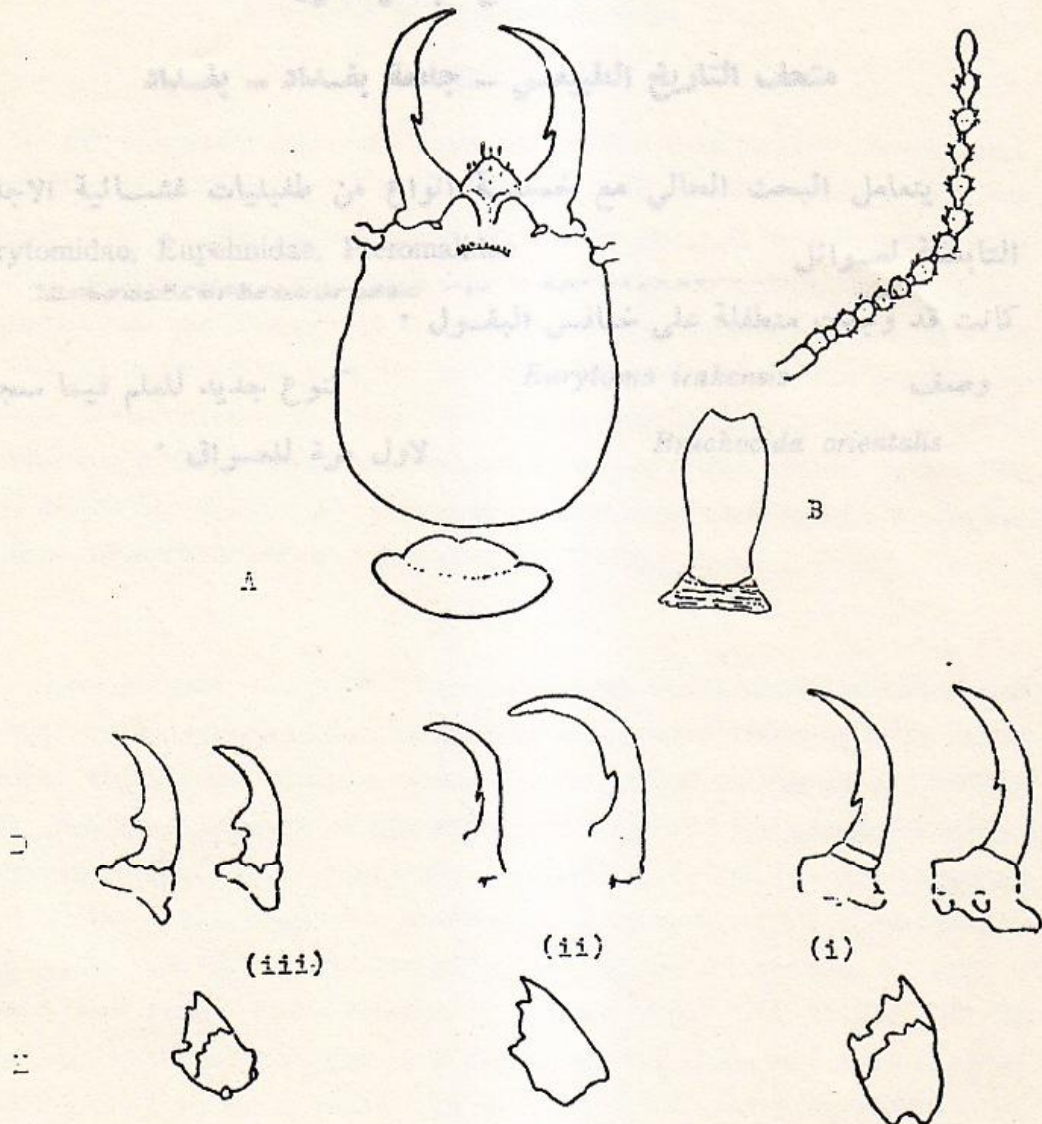


Fig.1 - Amitermes corpulentus Sp.n. Soldier (i).
head and pronotum; (B) postmentum; (C) antenna .
Comparison of corpulentus (i) with messinae (ii) and villis (iii),
(D) Left mandible. Worker (E) left mandible .

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Fig. 1. — *Amitermes corpulentus* sp. n. Soldier (A).

(A) head and pronotum; (B) postmentum; (C) antenna.

Comparison of *corpulentus* (i) with *mesasiaticus* (ii) and *villia* (iii).

(D) Left mandible. Worker (E) Left mandible.

Fig. 2. — *Anacanthotermes saudiensis* sp. n. Soldier

(A) Head and pronotum; (B) postmentum. Comparison of *saudiensis*

(i) with *shabli* (ii) antenna and with *vagans* (iii).

(D) mandibles. Worker (E) Left mandible.

Ann. Iran. Mus. Hist. Mus.
(1960) 3 (2) : 25-33

موسم الحشرات الجديدة من الأرياف في العراق
سليمان بن الحسين العلوي

(1) *Amitermes corpulentus* sp. n. Soldier
عبدالله محمد علي العلوي

(2) *Anacanthotermes saudiensis* sp. n. Soldier
عبدالله محمد علي العلوي

البيوت المبنية للحيث الزراعية والبيوت المائية . أبو حنيفة
محمد بن علي العلوي

البيوت المبنية للحيث الزراعية . قسم الحشرات المائية
عبدالله محمد علي العلوي

118. *Amitermes corpulentus* sp. n. Soldier
Head and pronotum; (B) postmentum; (C) antenna.

Comparison of *corpulentus* (i) with *mesasiaticus* (ii) and *villia* (iii).
(D) Left mandible. Worker (E) Left mandible.

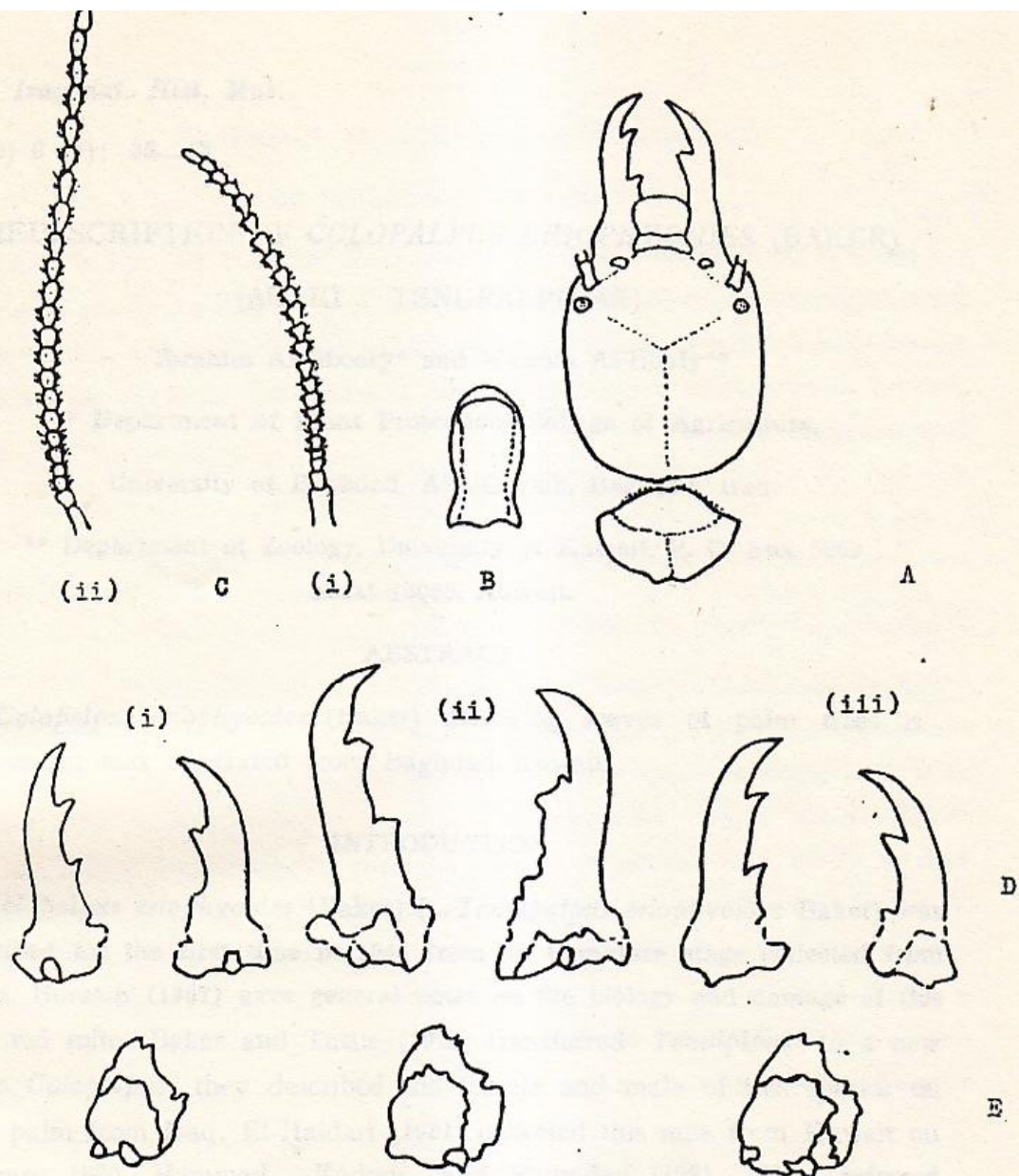


Fig.2. Anacanthotermes sawensis sp. n. soldier (A) Head and pronotum;(B) postnotum. Comparison of sawensis (i) with ubachi (ii),(C) antenna.and with vagans (iii),(D) mandibles. Worker (E) Left mandible.

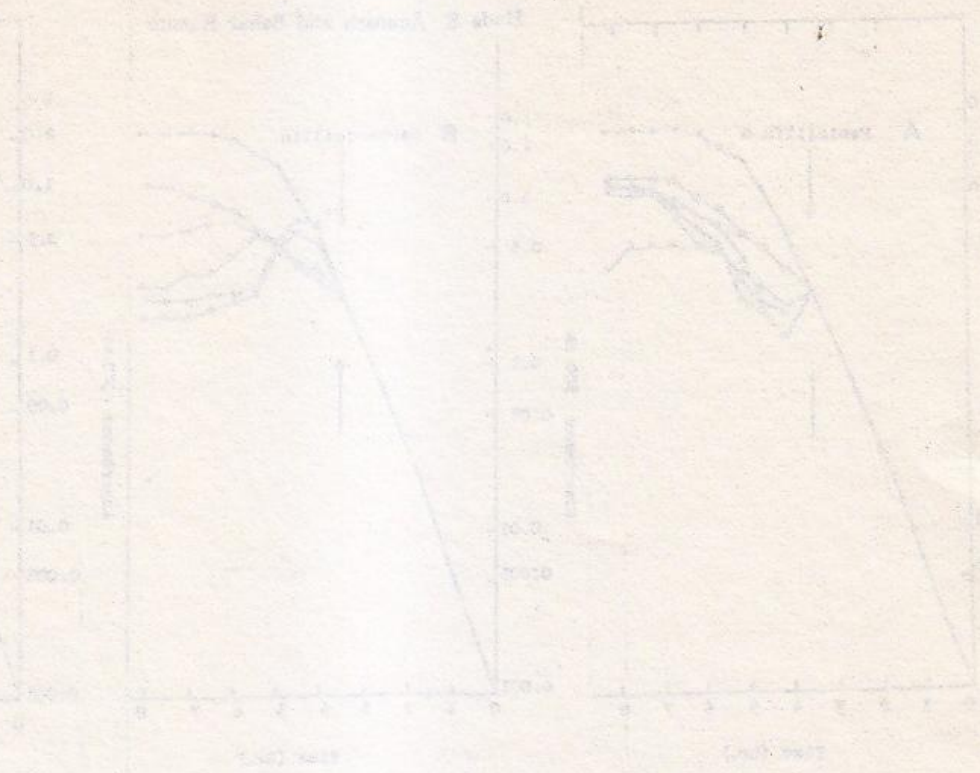


Figure 19 Effect of amino acid concentrations on the growth of penicillin G, tyrothricin, and bacitracin in wheat L. coli. The amino acids are: A tyrothricin, B tyrothricin, C tyrothricin, D tyrothricin, E tyrothricin, F tyrothricin, G tyrothricin, H tyrothricin, I tyrothricin, J tyrothricin.

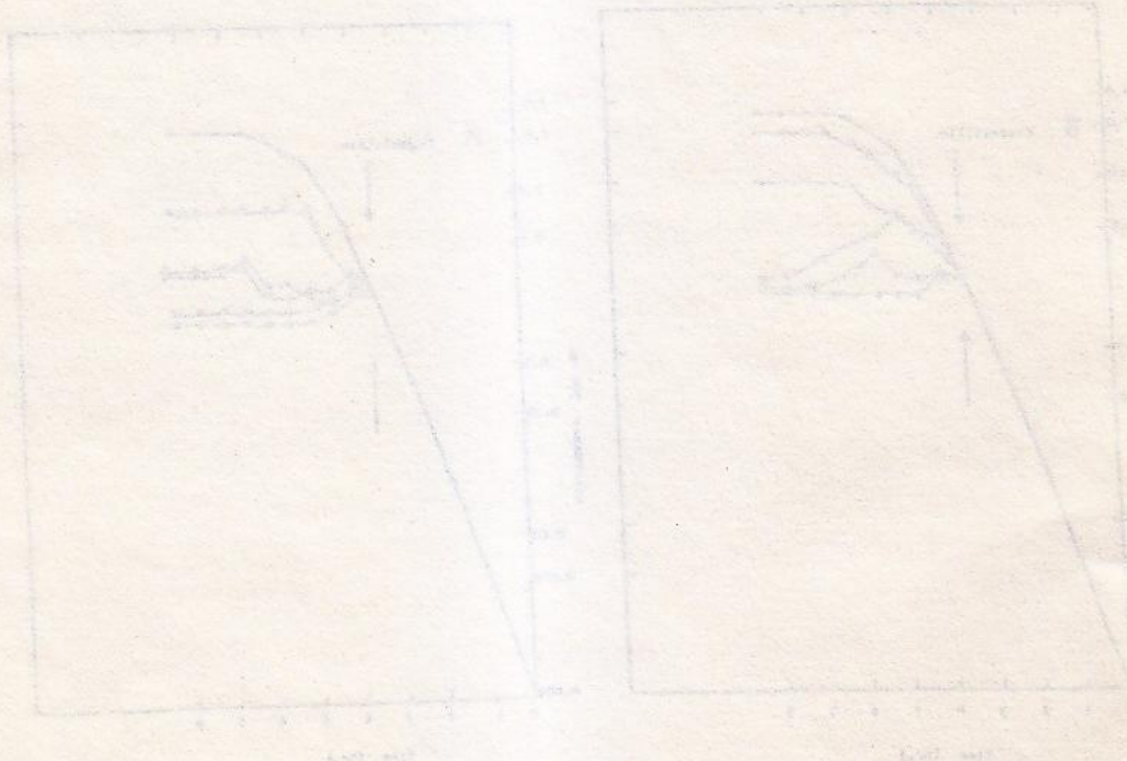


Figure 20 Effect of amino acid concentrations on the growth of penicillin G, tyrothricin, and bacitracin in wheat L. coli. The amino acids are: A tyrothricin, B tyrothricin, C tyrothricin, D tyrothricin, E tyrothricin, F tyrothricin, G tyrothricin, H tyrothricin, I tyrothricin, J tyrothricin.