

NEW TERMITES FROM IRAN*

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Abstract: Termite fauna of Iran was surveyed during 1990 to 1995. As a result, 19 species were collected from Iran. In the present report five new species, *Postelectrotermes bidentatus* n.sp., *P. zabulniensis* n.sp., *Anacanthotermes gurganiensis* n.sp., *Psammotermes prohybostoma* n.sp. and *Amitermes paravilis* n.sp. are described. Different morphological features, their ranges, standard deviation, mean values and co-efficient of variability are discussed.

Key words: Termite, new species, Iran.

INTRODUCTION

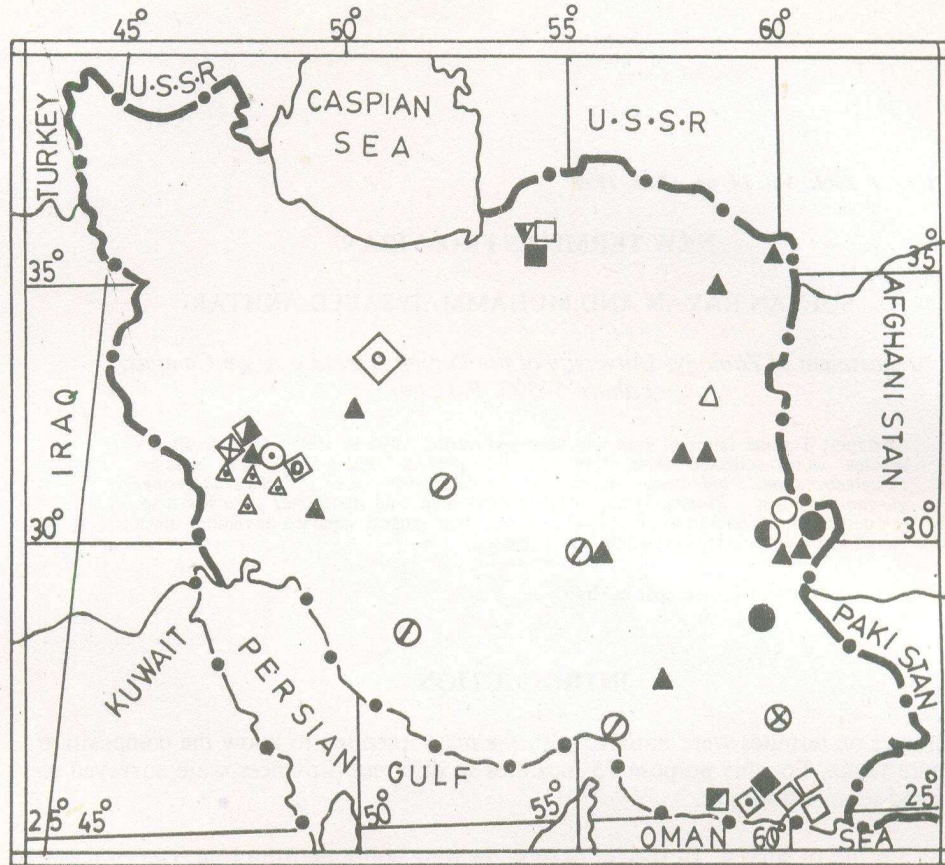
Studies on termites were initiated with the main intention to know the composition of termite fauna. For this purpose 75 localities in different provinces were surveyed to understand termite diversity.

As a result of survey, 19 species of termites were collected from Iran. Out of these, five species of termites are new to science and are being described presently. Termite fauna of Iran is comprised of the species given in the map.

MATERIALS AND METHODS

The present studies are based on the collection of termites from different provinces of Iran, except Kurdistan and Azarbijan that could not be sampled.

Termite colonies collected from the field and houses were given field number and preserved in 80% ethanol, for subsequent studies in the laboratory. The specimens were examined under Leitz Stereoscopic microscope with built-in magnification changer.



Map of Iran, showing distribution of termite species.

Measurements were taken with the aid of an ocular micrometer. Drawings were made with the help of a Camera Lucida. The type, material and duplicate specimens are distributed as follows:

Holotypes: Deposited in the Department of Zoology, Entomology Laboratory, presently under the custody of Prof. Dr. Muhammad Saeed Akhtar, Paratypes and duplicates: in the Department of Zoology, University of the Punjab, Lahore; and in Iran.

Terminology

Taxonomic terms and measurements presently used are as explained by Light and Wilson (1936), Emerson (1945, 1952), Ahmad (1950, 1955a, 1965), Krishna (1961) and Akhtar (1975). Standard deviation (S.D.) and co-efficient of variability (C.V.) was worked out according to Sokel and Rohlf (1973).

Postelectrotermes bidentatus, n.sp.

Major soldier (Fig. 1)

Head light reddish brown, area near frons and antennal carinae darker than head, dark brown; antennae and labrum light brown; mandibles reddish brown at bases, black

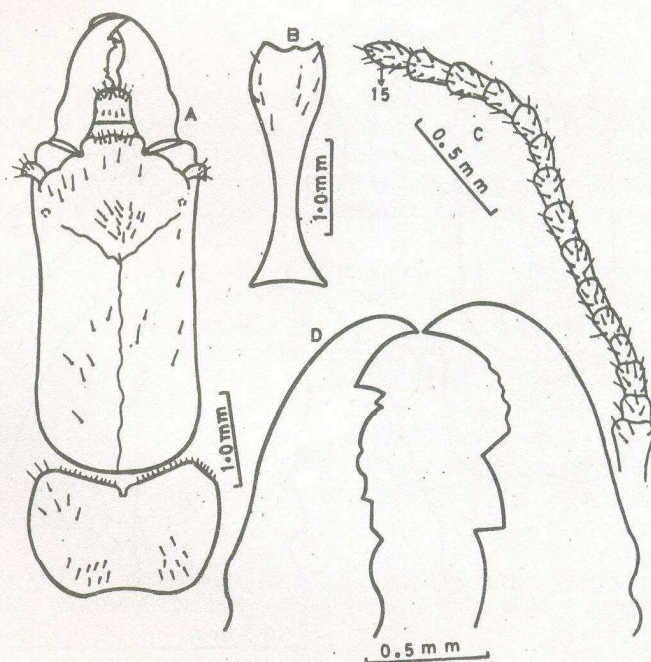


Fig. 1: Major soldier of *Postelectrotermes bidentatus*, new species: A, head and pronotum from above; B, postmentum from below; C, antenna; D, mandibles.

above; postclypeus darker than head; pronotum slightly lighter than head, meso- and metanota lighter than pronotum; abdomen and legs brownish yellow. Head with a few scattered hairs; labrum with few long bristles on anterior margin and a few short bristles in middle of disc; postclypeus with distinctly long bristles near anterior margin. Postmentum with a few bristles on anterior margin; pronotum with few short hairs. Head elongate, rectangular, lateral sides, slightly depressed in middle; antennal carinae distinct, lighter than head; Y-suture present; ocelli area below antennal carinae weakly indicated. Labrum dome-shaped, sides weakly convex; anteclypeus white, trapezoid. Mandibles long, stoutly built, basal humps distinct; left mandible with apical, 5 marginal teeth and molar plate, inner cutting edge of the apical tooth concave; first marginal teeth well developed second located very close to first tooth, third, fourth and fifth weakly developed; right mandible with two well developed marginal teeth. Postmentum long, club-shaped, widest in anterior half, narrowest below middle (Table I). Antennae with 13-15 segments, first longest; second shortest. Pronotum wider than head, anterior margin deeply concave, lateral sides weakly convex, posterior side indistinctly emarginate in middle. Tibial spurs 3:3:3; mid tibia with an extra spine close to outer apical spur. Tarsi four-jointed.

Minor soldier (Fig. 2)

Head light reddish brown, area near frons and antennal carinae darker than head, dark brown; antennae and labrum light brown; mandibles reddish brown at bases, black

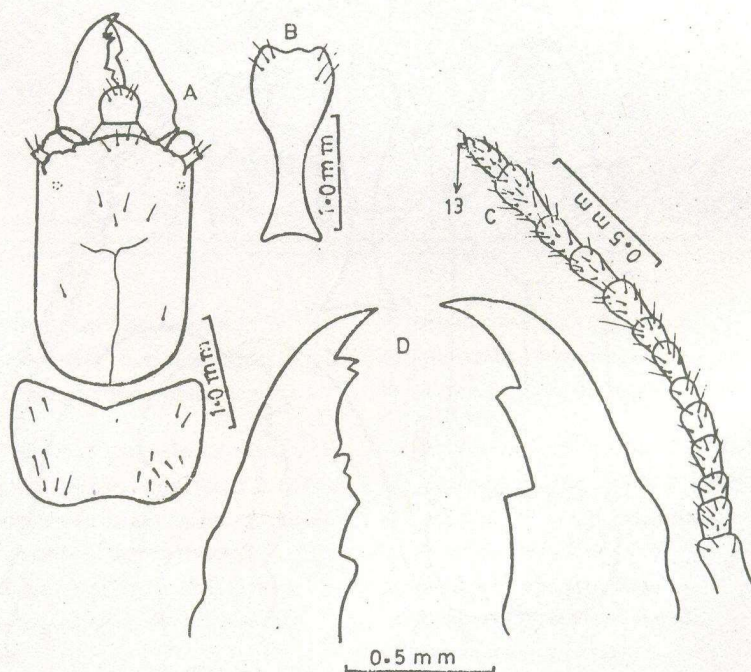


Fig. 2: Minor soldier of *Postelectrotermes bidentatus*, new species; A, head and pronotum from above; B, postmentum from below; C, antenna; D, mandibles.

above; postclypeus darker than head; pronotum, meso-and-metanota lighter than head; abdomen and legs brownish yellow. Head with a few scattered hairs; labrum with a few long bristles; postclypeus with a few long bristles near anterior margin; pronotum with a few bristles on anterior margin. Postmentum with a few short bristles. Head elongate, rectangular, lateral sides, parallel; antennal carinae distinct, lighter than head; Y-suture present; ocelli area below antennal carinae weakly indicated. Labrum dome-shaped, sides weakly convex; anteclypeus white. Mandibles, short, well developed, basal humps distinct; left mandible with apical, 5 marginal teeth and molar plate, inner cutting edge of the apical tooth concave, first marginal tooth well developed, second located very close to the first, third, fourth and fifth weakly developed; right mandible with two well developed marginal teeth. Postmentum, club-shaped, widest in anterior half narrowest below the middle (Table II). Antennae with 13-15 segments, first longest; third shortest. Pronotum wider than head, anterior margin deeply concave, lateral sides weakly convex; posterior sides indistinctly emarginate in middle. Tibial spur 3:3:3; mid tibia with an extra spine close to outer apical spur. Tarsi four-joined.

Table I: Measurements (in mm) of major soldiers of *Postelectrotermes bidentatus*, n.sp. (number of specimens measured is given in parenthesis).

	Holotype	Locality: Zabul (Jalahi)		
		Range (n=3)	Mean \pm S.D.	C.V.
Length of head to side base of mandibles	3.50	3.00-3.50	3.20 \pm 0.26	8.12
Length of left mandible	1.60	1.50-1.60	1.43 \pm 0.06	3.72
Length of right mandible	1.60	1.50-1.60	1.53 \pm 0.06	3.72
Width of head at side base of mandibles	1.45	1.30-1.45	1.38 \pm 0.08	5.50
Width of head at postero-lateral ends of antennal carinae	1.60	1.40-1.60	1.53 \pm 0.11	7.18
Maximum width of head	1.85	1.65-1.85	1.76 \pm 0.10	5.68
Length of postmentum	2.70	2.65-2.70	2.66 \pm 0.03	1.05
Maximum width of postmentum	0.85	0.80-0.85	0.83 \pm 0.03	3.37
Minimum width of postmentum	0.30	0.25-0.30	0.28 \pm 0.03	10.00
Length of pronotum	1.25	1.10-1.25	1.15 \pm 0.09	7.47
Width of pronotum	2.25	1.90-2.25	2.08 \pm 0.17	8.17

Comparisons

The soldier of *P. bidentatus* comes close to *P. pasniensis* described from Pakistan, but differs in having first and second marginal teeth located very closely.

Type locality

Zabul (Jalahi) (Type locality), major soldiers (Holotype, paratype), minor soldiers (Morphotype, Paramorphotype), nymph, collected by S. Ravan on 16.6.1991 from *Populus caspica*.

Table II: Measurements (in mm) of minor soldiers of *Postelectrotermes bidentatus*, n.sp. (number of specimens measured is given in parenthesis).

	Holotype	Locality: Zabul (Jalahi)		
		Range (n=3)	Mean \pm S.D.	C.V.
Length of head to side base of mandibles	2.85	2.15-2.85	2.50 \pm 0.49	19.60
Length of left mandible	1.45	1.25 \pm 1.45	1.35 \pm 0.14	10.37
Length of right mandible	1.50	1.20-1.50	1.35 \pm 0.21	15.55
Width of head at side base of mandibles	1.30	1.15-1.30	1.22 \pm 0.10	8.19
Width of head at postero-lateral ends of antennal carinae	1.50	1.30-1.50	1.40 \pm 0.14	10.00
Maximum width of head	1.70	1.55 \pm 1.70	1.62 \pm 0.10	6.17
Length of postmentum	2.35	1.35-2.35	1.85 \pm 0.70	37.83
Maximum width of postmentum	1.00	0.75-1.00	0.87 \pm 0.17	19.54
Minimum width of postmentum	0.30	0.25-0.30	0.27 \pm 0.04	12.96
Length of pronotum	1.05	0.90-1.05	0.97 \pm 0.10	10.30
Width of pronotum	2.00	1.75-2.00	1.87 \pm 0.17	9.09

Postelectrotermes zabuliensis, n.sp.

Major soldier (Fig.3)

Head light reddish brown, area near postclypeus and antennal carinae darker than rest of head; antennae and labrum light brown; mandibles dark brown at bases, black

above; pronotum, meso-and-metanota lighter than head; abdomen and legs yellowish brown. Head with scattered hairs and a few bristles; labrum with a few long bristle on anterior margin and a few in middle; postclypeus with a few long bristle near anterior margin. Postmentum with a few bristle on anterior half; pronotum with few scattered hairs. Head elongate, rectangular, sides slightly depressed in middle; antennal carinae distinct; Y-suture present; ocelli area below antennal carinae weakly indicated. Labrum dome-shaped, sides weakly convex. Anteclypeus white, trapezoid. Mandibles long, stoutly built, basal humps distinct; left mandible with apical and 4 marginal teeth and molar plate, inner cutting edge of the apical tooth concave, first marginal tooth well developed, second, third and fourth weakly developed; right mandible with two well developed marginal teeth. Postmentum long, club shaped, widest in anterior half, narrowest below middle (Table III). Antennae with 13-15 segments, first longest, second and third sub-equal. Pronotum wider than head, anterior margin deeply concave, lateral sides weakly convex. Tibial spurs 3:3:3; mid tibia with an extra close to outer apical spur. Tarsi four-jointed.

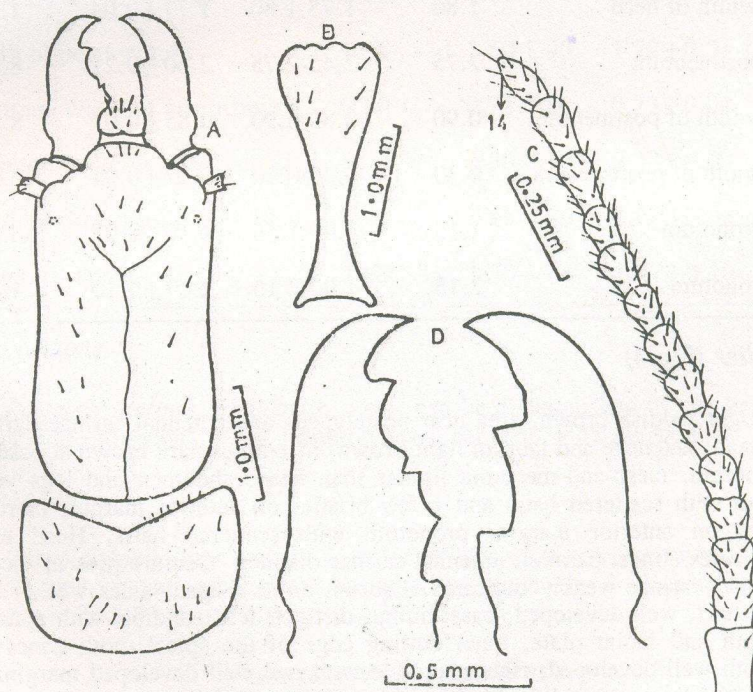


Fig. 3: Major soldier of *Postelectrotermes zabuliensis*, new species: A, head and pronotum from above; B, postmentum from below; C, antenna; D, mandibles.

Table III: Measurements (in mm) of major soldiers of *Postelectrotermes zabuliensis*, n.sp. (number of specimens measured is given in parenthesis).

	Locality: Zabul (Jalahi)			
	Holotype	Range (n=3)	Mean \pm S.D.	C.V.
Length of head to side base of mandibles	3.20	2.95-3.20	3.07 \pm 0.17	5.53
Length of left mandible	1.44	1.45-1.55	1.50 \pm 0.07	4.66
Length of right mandible	1.55	1.45-1.55	1.50 \pm 0.07	4.66
Width of head at side base of mandibles	1.40	1.35-1.40	1.37 \pm 0.04	2.55
Width of head at postero-lateral ends of antennal carinae	1.60	1.50-1.60	1.55 \pm 0.07	4.51
Maximum width of head	1.80	1.75-1.80	1.77 \pm 0.04	1.97
Length of postmentum	2.75	2.45-2.75	2.60 \pm 0.21	8.07
Maximum width of postmentum	0.90	0.80-0.90	0.85 \pm 0.07	8.23
Minimum width of postmentum	0.30	0.25-0.30	0.27 \pm 0.04	2.96
Length of pronotum	1.15	1.05-1.15	1.10 \pm 0.07	6.36
Width of pronotum	2.15	2.00-2.15	2.07 \pm 0.10	4.83

Minor soldier (Fig.4)

Head light reddish brown, area near postclypeus and antennal carinae darker than rest of the head; antennae and labrum light brown; mandibles dark brown at bases, black above; pronotum, meso-and-metanota lighter than head; abdomen and legs yellowish brown. Head with scattered hairs and a few bristles on anterior margin; labrum with long bristles on anterior margin; pronotum with scattered hairs. Head elongate, rectangular, sides almost parallel; antennal carinae distinct; Y-suture present, ocelli area below antennal carinae weakly indicated. Labrum dome-shaped, sides weakly convex. Mandibles, short, well developed, basal humps distinct; left mandible with apical and 4 marginal teeth and molar plate, inner cutting edge of the apical tooth concave, first marginal tooth well developed; right mandible with two well developed marginal teeth. Postmentum, medium size, club-shaped, widest in anteriorly, narrowest below middle (Table IV). Antennae with 13-15 segments, first longest, second and third sub-equal. Pronotum wider than head, anterior margin deeply concave, lateral sides almost parallel and weakly convex. Tibial spurs 3:3:3; mid tibia with an extra spine close to outer apical spur. Tarsi four-jointed.

Table IV: Measurements (in mm) of minor soldiers of *Postelectrotermes zabuliensis*, n.sp. (number of specimens measured is given in parenthesis).

	Holotype	Locality: Zabul (Jalahi)		
		Range (n=3)	Mean \pm S.D.	C.V.
Length of head to side base of mandibles	2.40	2.25-2.40	2.32 ± 0.10	4.31
Length of left mandible	1.40	1.30-1.40	1.35 ± 0.07	5.18
Length of right mandible	1.40	1.30-1.40	1.35 ± 0.07	5.18
Width of head at side base of mandibles	1.25	1.20-1.25	1.22 ± 0.04	2.86
Width of head at postero-lateral ends of antennal carinae	1.40	1.35-1.40	1.37 ± 0.04	2.55
Maximum width of head	1.70	1.60-1.70	1.65 ± 0.07	4.24
Length of postmentum	1.95	1.50-1.95	1.72 ± 0.31	18.02
Maximum width of postmentum	0.80	0.75-0.80	0.77 ± 0.04	4.54
Minimum width of postmentum	0.30	0.30-0.30	0.30 ± 0.00	0.00
Length of pronotum	0.90	0.85-0.90	0.87 ± 0.04	4.02
Width of pronotum	1.85	1.70-1.85	1.77 ± 0.10	5.64

Comparisons

Postelectrotermes zabuliensis, n.sp., can be distinguished by the known species in having first and second of left mandible marginal teeth widely separated.

Type locality

Zabul (Jalahi) (type locality), major soldier (holotype, paratype), minor soldiers (morphotype, paramorphotypes), nymphs, collected by S. Ravan and Noor-u-din-Farooqi on 20.6.91 from *Populus caspica*.

Anacanthotermes gurganiensis, n.sp.

Major soldier (Fig.5)

Head dark reddish brown; antennae, lighter than head; postclypeus slightly darker than head; antennal carinae nearly as dark as postclypeus; mandibles dark reddish brown at bases, blackish above; pronotum, mesonotum and metanotum lighter than head, meso-

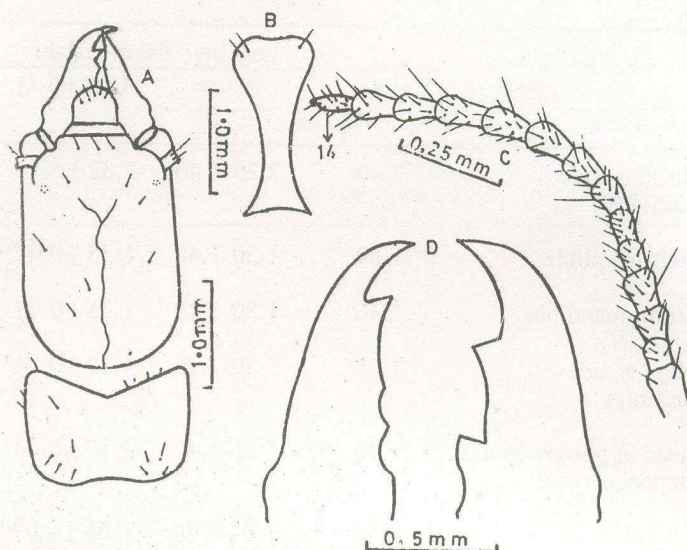


Fig. 4: Minor soldier of *Postelectrotermes zabuliensis*, new species: A, head and pronotum from above; B, postmentum from below; C, antenna; D, mandibles.

and-metanota with two round spots near anterolateral corners along posterior margin; abdomen and legs yellowish brown. Head with scattered hairs and bristles; postclypeus with a few hairs and long bristles near anterior margin; labrum with scattered hairs and bristles in the middle of disc; postmentum with a few long bristles in anterior half; pronotum with a few scattered hairs on the anterior margin and scattered bristles on posterior half. Head squarish, sides almost parallel, without depression in middle; antennal carinae well developed; Y-suture present; eyes small with lateral sides slightly convex; ocelli weakly developed, minute spots, slightly incurved. Left mandible with apical and 4 marginal teeth; molar plate protuberance like, inner cutting edge of the apical tooth, anterior edge of first marginal tooth of left mandible convex from tip to junction of the inner edge of apical tooth, posterior cutting edge of first marginal tooth concave below tip to slightly convex at base, second marginal tooth with anterior edge more convex than that of first marginal tooth, 3rd and 4th marginal tooth minute elevation molar plate without serrations; right mandible with inner cutting edge of apical convex at base; concave above tip to anterior margin of first marginal tooth convex; posterior margin concave in upper half; second marginal tooth with anterior margin convex, posterior margin concave in anterior half, molar plate with distinct serration. Postmentum medium size, flat, variable shape, widest in middle (Table V). Antennae with 25-26 segments, the first longest, second twice as long as third, which is shortest. Pronotum well developed raised anteriorly in middle, posterior margin slightly depressed in middle; mesonotum with weak depression below anterior lateral corners,

lateral sides convex below, posterior margin wavy, depressed in middle. Tibial Spurs 3:4:4. Tarsi fourjointed.

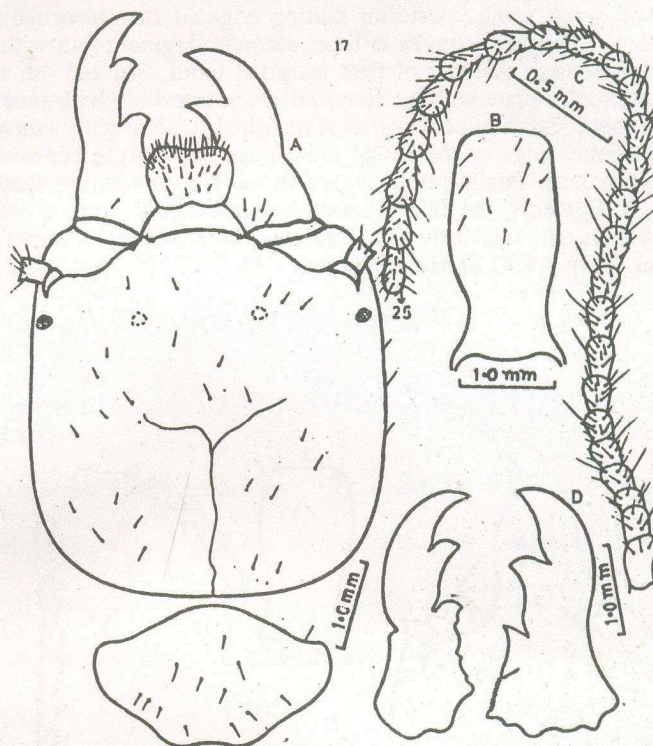


Fig. 5: Major soldier of *Anacanthotermes gurganiensis*, new species: A, head and pronotum from above; B, postmentum from below; C, antenna; D, mandibles.

Minor soldier (Fig.6)

Head reddish brown, antennae lighter than head; postclypeus slightly darker than head; labrum, antennal carinae slightly lighter than postclypeus; mandibles dark reddish brown at bases, dark black above; pronotum, mesonotum lighter than head; metanotum lighter than mesonotum; in mesonotum two round spots near anterolateral corners and two thick lines along posterior margin present. Legs yellowish brown. Head with scattered hairs and bristles; postclypeus with a few hairs and long bristles along anterior margin; labrum with scattered hairs and bristles in middle of disc; postmentum with a few long bristles in anterior half; pronotum with a few scattered hairs on the anterior margin and scattered bristles in posterior half. Head squarish, sides almost parallel. Antennal carinae well developed; Y-suture present; eyes small, ocelli weakly developed, minute spots, slightly raised than surface of head. Anteclypeus, white, trapezoid.

Mandibles well developed, slightly incurved; left mandible with apical and 4 marginal teeth, molar plate protuberance like; inner cutting edge of the apical tooth concave; anterior edge of first marginal of left mandible slightly convex from tip to junction of the inner edge of apical tooth, posterior cutting edge of first marginal tooth slightly concave in upper half; slightly convex at base; second marginal tooth with anterior edge slightly more convex than that of first marginal tooth, 3rd and 4th marginal teeth minute elevations; molar plate without serration; right mandible with inner cutting edge of first marginal tooth. Slightly concave; first marginal tooth slightly convex from tip to junction with the inner edge of the apical tooth posterior margin concave; molar plate with indistinct serrations. Postmentum, widest in middle; variable in shape (Table VI). Antennae with 25 segments, the first longest, second twice as long as third, pronotum well developed raised anteriorly in middle, antero-lateral corner with short projection. Tibial Spurs 3:4:4. Tarsi four-jointed.

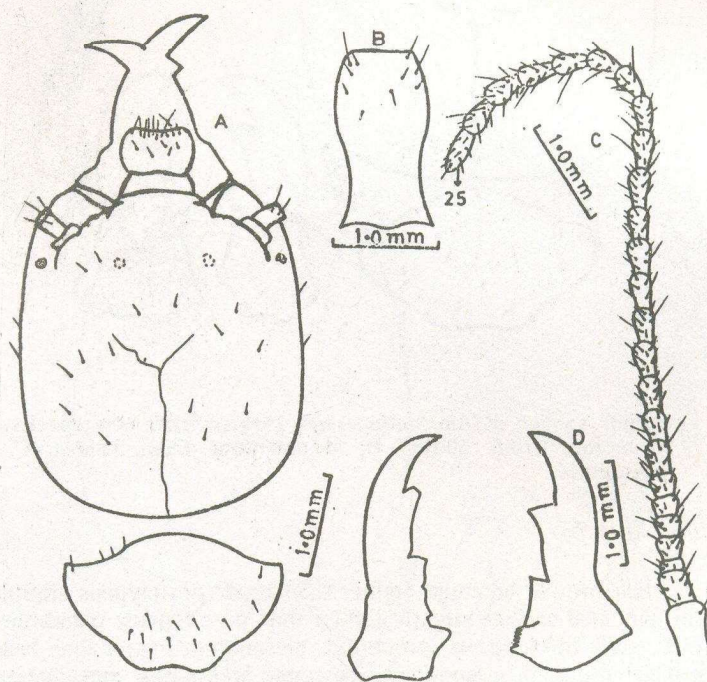


Fig. 6: Minor soldier of *Anacanthotermes gurganiensis*, new species: A, head and pronotum from above; B, postmentum from below; C, antenna; D, mandibles.

Table V: Measurements (in mm) of major soldiers of *Anacanthotermes gurganiensis*, n.sp. (number of specimens measured is given in parenthesis).

	Holotype	Locality: Gurgan		
		Range (n=3)	Mean \pm S.D.	C.V.
Length of head to side base of mandibles	3.80	3.10-3.80	3.50 \pm 0.36	10.28
Length of left mandible	2.40	2.25-2.50	2.38 \pm 0.12	5.04
Length of right mandible	2.15	1.95-2.30	2.13 \pm 0.17	7.98
Width of head at side base of mandibles	2.60	1.85-2.60	2.23 \pm 0.37	16.59
Width of head at postero-lateral ends of antennal carinae	2.70	1.95-2.70	2.38 \pm 0.38	15.96
Maximum width of head	3.60	3.10-3.60	3.41 \pm 0.27	7.91
Length of postmentum	2.25	1.65-2.25	1.93 \pm 0.30	15.54
Maximum width of postmentum	1.20	1.00-1.25	1.15 \pm 0.13	11.30
Minimum width of postmentum	0.80	0.70-0.80	0.76 \pm 0.06	7.50
Length of pronotum	1.50	1.40-1.50	1.46 \pm 0.06	3.90
Width of pronotum	2.70	2.25-2.70	2.51 \pm 0.23	9.16

Comparisons

The soldier of *A. gurganiensis*, comes close to *A. peshawarensis*, described from Pakistan. However, it can be distinguished by its antennae having 25 segments (29 in *A. peshawarensis* Akhtar).

Type locality

Gurgan (Tappay Mirza biayl), (Type locality); Soldiers (Holotype, Paratype), nymph, collected by S. Ravan on 8.8.90 from *A. cinerascens* and *S. babylonica*.

Table VI: Measurements (in mm) of minor soldiers of *Anacanthotermes gurganiensis*, n.sp. (number of specimens measured is given in parenthesis).

	Holotype	Locality: Gurgan		
		Range (n=3)	Mean \pm S.D.	C.V.
Length of head to side base of mandibles	2.95	2.36-2.95	2.65 \pm 0.42	15.84
Length of left mandible	2.10	2.00-2.10	2.05 \pm 0.07	3.41
Length of right mandible	1.90	1.90-1.90	1.90 \pm 0.00	0.00
Width of head at side base of mandibles	1.80	1.80-1.95	1.87 \pm 0.10	5.34
Width of head at postero-lateral ends of antennal carinae	1.90	1.90-1.95	1.92 \pm 0.04	1.82
Maximum width of head	2.75	2.60-2.75	2.67 \pm 0.10	3.74
Length of postmentum	1.65	1.50-1.65	1.57 \pm 0.10	6.36
Maximum width of postmentum	0.90	0.80-0.90	0.85 \pm 0.07	8.23
Minimum width of postmentum	0.65	0.60-0.65	0.62 \pm 0.04	5.64
Length of pronotum	1.25	1.00-1.25	1.12 \pm 0.17	15.17
Width of pronotum	2.05	2.05-2.20	2.12 \pm 0.10	4.71

Psammotermes prohybostoma, n.sp.

Major soldier (Fig. 7)

Head pale golden yellow; antennae and labrum dark brown, postclypeus darker than head; mandibles dark brown at bases, black above; pronotum, meso- and metanota lighter than head; abdomen and legs brownish yellow. Head with many hairs and bristles. Pronotum with long bristles and small hairs on antero-posterior margin; labrum with many long bristles and hairs on anterior and posterior margin; postclypeus with many hairs on near anterior margin; postmentum with one or two small bristles on the anterior half. Head, rectangular, sides almost parallel, thick, with whole at the centre of the head; labrum, subpentagonal and "crown shaped", sides curved inward; distal lobe triangular with a roundly pointed tip. Mandibles, long, sabre-shaped or sickle-shaped incurved at apex, thick and strong basally, slender and sharply pointed apically; right mandible with 4-6 irregular teeth; left mandible with 6-8 irregular teeth. Postmentum, long, club-shaped, widest in anterior half, narrowed in posterior half, both anterior and posterior margin straight (Table VII). Antennae with 14-15 segments; first and third is longest, second shortest. Pronotum, saddle-shaped, distinctly notched in anterior

margin, slightly emarginate to almost straight in posterior margin. Tibial spurs 3:2:2. Tarsi four-jointed.

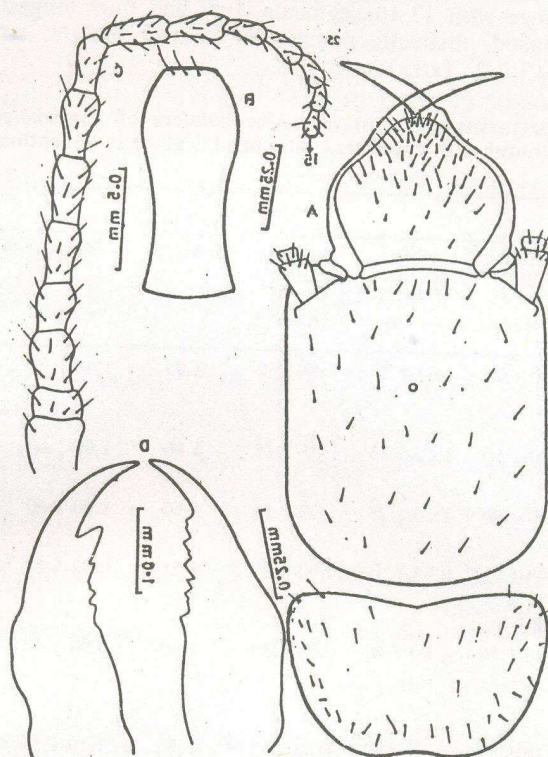


Fig. 7: Major soldier of *Psammotermes prohybostoma*, new species: A, head and pronotum from above; B, postmentum from below; C, antenna; D, mandibles.

Minor soldier (Fig. 8)

Head brownish yellow to yellowish brown; antennae and labrum darker than head; mandibles, light brown at bases, reddish brown above. Postclypeus darker than head; pronotum, meso- and metanota lighter than head; abdomen and legs yellowish brown. Head with few scattered bristles and hairs, labrum with few long bristles on the anterior margin; pronotum with many bristles and hairs on the anterior and posterior margin; postmentum without any bristles. Head subrectangular, sides almost parallel, with whole in the centre of the head. Labrum dome-shaped, sides slightly convex. Mandibles, thin,

sabre-shaped or sickle-shaped, incurved at apex, thick and strong basally, slender and sharply pointed apically; right mandible with 4-5 irregular teeth; left mandible with 6-7 irregular teeth. Postmentum, medium size, club shaped, widest in anterior half, narrowed in posterior half, anterior margin straight, posterior margin concave (Table VIII). Antennae with 13-14 segments; first and thirs longest, second shortest. Pronotum saddle-shaped, distinctly notched in anterior margin, straight in posterior margin. Tibial spurs 3:2:2. Tarsi four-joined.

Table VII: Measurements (in mm) of major soldiers of *Psammotermes prohybostoma* n.sp. (number of specimens measured is given in parenthesis).

	LOCALITIES			Hologype	Range	Mean \pm S.D.	C.V.
	Chabahar (Tees) C = 1 (n=12)	Chabahar (Teezkopan) C = 2 (n=6)	Chabahar (Vashname) C = 3 (n=6)				
Length of head to side base of mandible	1.40-1.95	1.45-1.55	1.40-1.50	1.95	1.40-1.95	1.54 \pm 0.20	12.98
Length of left mandible	1.00-1.60	1.10-1.25	1.05-1.15	1.60	1.00-1.60	1.19 \pm 0.21	17.64
Length of right mandible	1.00-1.60	1.15-1.25	1.00-1.15	1.60	1.00-1.60	1.19 \pm 0.22	18.48
Width of head at base sides of mandibles	0.90-1.25	0.95-1.05	0.90-0.95	1.25	0.90-1.25	1.00 \pm 0.13	13.00
Width of head at postero-lateral ends of antennal carinae	0.90-1.40	1.00-1.10	0.95-1.00	1.40	0.90-1.40	1.05 \pm 0.18	17.14
Maximum width of head	1.10-1.55	1.15-1.20	1.10-1.15	1.55	1.10-1.55	1.20 \pm 0.17	14.16
Length of postmentum	1.05-1.25	0.95-1.10	1.05-1.15	1.25	0.90-1.25	1.09 \pm 0.10	9.17
Maximum width of postmentum	0.50-0.60	0.45-0.50	0.50-0.55	0.60	0.45-0.60	0.51 \pm 0.05	10.00
Minimum width of postmentum	0.30-0.45	0.30-0.35	0.30-0.35	0.45	0.30-0.45	0.34 \pm 0.06	10.29
Length of pronotum	0.50-0.90	0.55-0.65	0.55-0.60	0.90	0.50-0.90	0.62 \pm 0.14	22.58
Width of pronotum	0.90-1.35	0.95-1.05	0.95-1.00	1.35	0.90-1.35	1.03 \pm 0.16	15.53

C = Colony

Comparison

Psammotermes prohybostoma, comes very close to *P. hybostoma* (Desneux). The soldier of *P. prohybostoma* is, however, comparatively smaller in size, labrum is broader and is provided with 14-15 antennal segments (16-17 in *P. hybostoma*).

Type of locality

Chabahar (Tees), (type locality), soldiers (holotype, paratype) workers, collected by S. Ravan and Hamid Sanjarani on 5.7.90 from *Acacia seyal*. Chabahar (Teezkopan), soldiers, workers, collected by S. Ravan on 28.7.90 from *A. seyal*. Chabahar (Vashname), soldiers, workers, collected by S. Ravan on 15.6.91 from *A. seyal*.

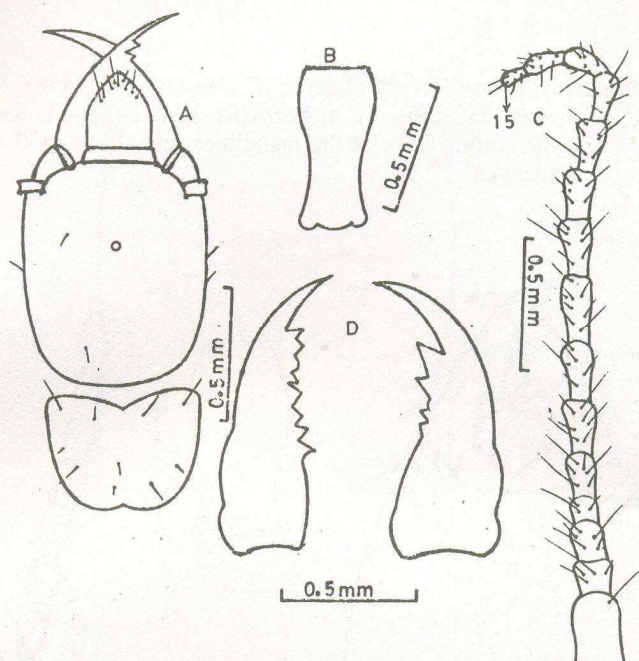


Fig. 8: Minor soldier of *Psammotermes prohybostoma*, new species: A, head and pronotum from above; B, postmentum from below; C, antenna; D, mandibles.

Amitermes paravilis, n.sp.*Soldier (Fig.9)*

Head brownish yellow to yellowish brown; antennae light brown; labrum light yellow; mandibles brownish yellow at bases, reddish brown to dark brown above; pronotum lighter than head, meso-and-metanota, abdomen pale; legs yellowish brown. Head with a few bristles and short hairs, frontal projection slightly more hairy, than the rest of the body; labrum with few long bristles and short hairs; postclypeus with few

bristles near anterior margin. Head weakly rectangular, thick, slightly narrowed anteriorly, widest almost in middle, posterior margin weakly convex. Labrum dome-shaped, wider than long, lateral sides slightly convex; anteclypeus bilobed. Mandibles, sickle-shaped, thick, outer margin below tooth depressed; tooth sharply pointed, posterolaterally directed, placed almost in middle. Postmentum widest in anterior half and narrowest in posterior half (Table IX). Antennae with 14 segments, first longest, second shortest. Pronotum saddle-shaped, indistinctly notched anteriorly; posterior margin emarginate to almost straight. Tibial spurs 3:2:2. Tarsi four-jointed.

Comparison

Amitermes paravilis, comes very close to *A. vilis* (Hagen, 1858), but differs in the shape of head capsule and mandibles. In *A. paravilis*, head capsule is weakly rectangular (oval in *vilis*), while the cutting edge of the mandibles just above tooth is much broader than apices that are narrower.

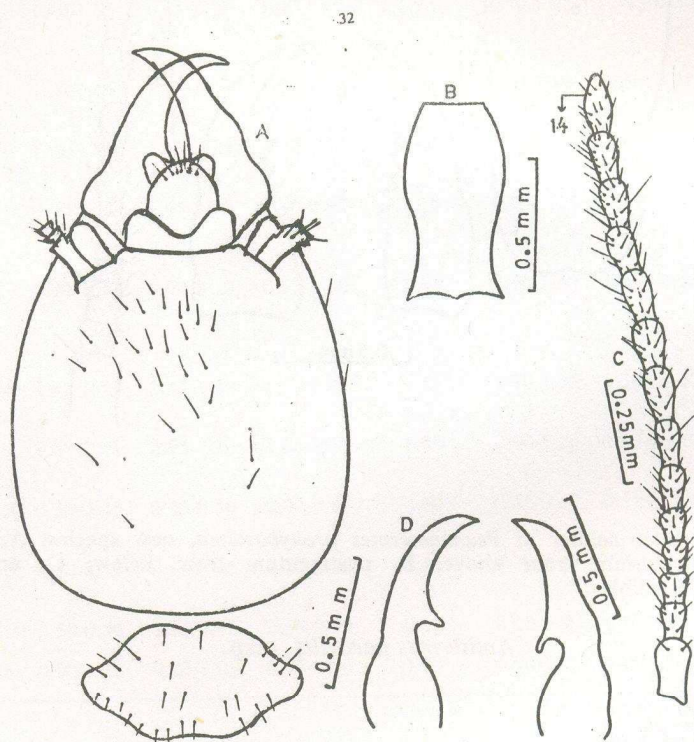


Fig. 9: Soldier of *Amitermes paravilis*, new species: A, head and pronotum from above; B, postmentum from below; C, antenna; D, mandibles.

Table VIII: Measurements (in mm) of minor soldiers of *Psammotermes prohybostoma* n.sp. (number of specimens measured is given in parenthesis).

	LOCALITIES				Range (n=24)	Mean±S.D.	C.V.
	Chabahar (Tees) C = 1 (n=12)	Chabahar (Teezkopan) C = 2 (n=6)	Chabahar (Vashname) C = 3 (n=6)	Hologype			
Length of head to side base of mandible	1.20-1.35	1.25-1.35	1.25-1.35	1.35	1.20-1.35	1.29±0.07	5.11
Length of left mandible	0.95-1.15	0.85-0.95	0.80-1.00	1.05	0.80-1.15	0.95±0.12	12.63
Length of right mandible	0.95-1.15	0.80-0.95	0.80-1.05	1.10	0.80-1.15	0.95±0.13	13.68
Width of head at base sides of mandibles	0.80-1.00	0.75-0.85	0.75-0.90	0.95	0.75-1.00	0.84±1.00	11.54
Width of head at postero-lateral ends of antennal carinae	0.85-1.00	0.85-0.90	0.80-0.95	1.00	0.80-1.00	0.89±0.07	8.20
Maximum width of head	1.00-1.15	1.00-1.05	1.05-1.10	1.10	1.00-1.10	1.05±0.06	5.52
Length of postmentum	0.90-1.15	0.95-1.00	0.90-1.05	1.10	0.90-1.15	0.99±1.00	9.79
Maximum width of postmentum	0.45-0.50	0.45-0.45	0.45-0.50	0.45	0.45-0.50	0.46±0.003	5.43
Minimum width of postmentum	0.30-0.35	0.30-0.35	0.35-0.35	0.30	0.30-0.35	0.33±0.03	7.57
Length of pronotum	0.50-0.60	0.45-0.50	0.45-0.50	0.60	0.45-0.60	0.50±0.05	10.8
Width of pronotum	0.80-0.95	0.80-0.95	0.60-0.85	0.90	0.60-0.95	0.82±0.12	14.63

C = Colony

Type locality

Dezful (type locality) soldiers (holotype, paratype), workers, collected by S. Ravan on 12.8.90 from *P. caspica*. Shoushtar, soldier (paratype), workers, collected by S. Ravan on 20.7.91 from *P. caspica*. Ahwaz, soldiers (paratype), workers, collected by S. Ravan and Bijan Bajalan on 9.5.90 from *Morus alba*. Andimashk, soldiers (paratype), workers, collected by S. Ravan on 20.4.91 from *Salix babylonica*.

Table IX: Measurements (in mm) of soldiers of *Amitermes paravilis*, n.sp. (number of specimens measured is given in parenthesis).

	LOCALITIES					Range	Mean \pm S.D	C.V.
	Dezful C=1 (n=15)	Shou- shtar C=2 (n=10)	Ahwaz C=3 (n=5)	Andi- mashk C=4 (n=10)	Holotype			
Length of head to side base of mandibles	1.25-1.35	1.20-1.30	1.25-1.35	1.05-1.40	1.40	1.05-1.40	1.26 \pm 0.11	8.73
Length of left mandible	0.75-0.90	0.75-0.85	0.75-0.80	0.75-0.90	0.80	0.75-0.90	0.80 \pm 0.07	8.37
Length of right mandible	0.80-0.90	0.75-0.85	0.75-0.75	0.75-0.85	0.85	0.75-0.85	0.80 \pm 0.06	7.37
Tooth of left mandibles from tip	0.35-0.40	0.35-0.40	0.40-0.40	0.35-0.40	0.40	0.35-0.40	0.38 \pm 0.03	6.57
Width of head at base sides of mandibles	0.75-0.80	0.75-0.80	0.70-0.80	0.75-0.80	0.80	0.70-0.80	0.76 \pm 0.04	4.86
Width of head at posterolateral ends of antennal carinae	0.85-0.90	0.85-0.90	0.75-0.80	0.85-0.90	0.90	0.75-0.90	0.85 \pm 0.05	6.23
Maximum width of head	1.05-1.15	1.05-1.10	1.10-1.15	1.05-1.15	1.15	1.05-1.15	1.10 \pm 0.05	4.18
Length of postmentum	0.70-0.80	0.65-0.80	0.65-0.75	0.75-0.80	0.75	0.65-0.80	0.73 \pm 0.06	8.76
Maximum width of postmentum	0.30-0.35	0.35-0.40	0.35-0.40	0.30-0.35	0.35	0.30-0.40	0.35 \pm 0.40	10.57
Minimum width of postmentum	0.20-0.25	0.25-0.30	0.25-0.25	0.25-0.30	0.30	0.20-0.30	0.25 \pm 0.03	12.80
Length of pronotum	0.35-0.40	0.30-0.40	0.30-0.40	0.35-0.40	0.35	0.30-0.40	0.36 \pm 0.04	12.22
Width of pronotum	0.70-0.85	0.70-0.75	0.70-0.70	0.65-0.75	0.75	0.65-0.85	0.72 \pm 0.06	8.19

C = Colony

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