

A genetic and chemical study of six Oedipodinae species (Orthoptera: Caelifera: Acrididae) from Algeria

SOFRANE, Zina^{1,2,*}, DUPONT, Simon², DOUMANDJI, Salaheddine³ & BAGNÈRES, Anne-Geneviève^{2,4}

¹ Department of Animal Biology and Physiology. Faculty of Natural and Life Sciences, Ferhat Abbas University Sétif 1, El-Bez 2 campus, 19137, Sétif, Algeria.

² Institut de Recherche sur la Biologie de l'Insecte, UMR7261, CNRS-University of Tours, Parc Grandmont, 37200, Tours, France.

³ Research Laboratory of Plant Protection, Zoology. National Higher School of Agronomy, El-Harrach, 16004, Algiers, Algeria.

⁴ CEFE, CNRS, University of Montpellier, University Paul Valéry Montpellier 3, EPHE, IRD, 34293, Montpellier, France.

* E-mail: sofranezina1@yahoo.fr

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Supp. Table I. Details about the study species specimens: *Oedipoda miniata mauritanica* (Omin), *Acrotylus insubricus insubricus* (Ains), *Acrotylus patruelis* (Apat), *Sphingonotus azurescens* (Sazu), *Sphingoderus carinatus* (Scar), and *Sphingonotus finotianus* (Sfin). Sites: A = El-Ourecia, B = Bazer Sakhra.

Code	Site	Sex	Life stage	Collection date	Morph	CHCs	COI	Accession Number
AOm1	A	♂	Adult	02.11.2012	Omin	+	+	MK251045
BOm2	B	♂	Adult	16.11.2012	Omin	+	+	MK251037
BOm3	B	♂	Adult	16.11.2012	Omin	+	-	
BOm4	B	♂	Adult	09.11.2012	Omin	+	-	
BOm5	B	♀	Adult	13.10.2012	Omin	+	-	
BOm6	B	♂	Adult	01.11.2012	Omin	+	-	
BOm7	B	♂	Adult	29.06.2012	Omin	+	-	
AOm8	A	♂	Adult	14.09.2012	Omin	+	-	
BOm9	B	♀	Adult	01.11.2012	Omin	+	+	MK251043
BOm10	B	♂	Adult	01.11.2012	Omin	+	-	
AOm11	A	♂	Adult	05.10.2012	Omin	+	+	MK251042
AOm12	A	♀	Adult	05.10.2012	Omin	+	+	MK251039
BOm13	B	♀	Adult	28.09.2012	Omin	+	+	MK251044
AOm14	A	♀	Adult	22.06.2012	Omin	+	-	
AOm15	A	♀	Adult	23.11.2012	Omin	+	-	
AOm16	A	♀	Adult	23.11.2012	Omin	+	+	MK251038
AOm17	A	♂	Adult	08.09.2012	Omin	+	+	MK251040
BOm18	B	♀	Adult	09.11.2012	Omin	+	+	MK251041
AOm19	A	♀	Adult	06.07.2012	Omin	+	-	
AOm20	A	♀	Adult	23.11.2012	Omin	+	-	
AOm21	A	♂	Adult	07.08.2012	Omin	+	-	
AA1	A	♀	Adult	19.03.2012	Ains	+	+	MK251036

Code	Site	Sex	Life stage	Collection date	Morph	CHCs	COI	Accession Number
AA2	A	♂	Adult	02.11.2012	Ains	+	-	
AA3	A	♂	Adult	23.11.2012	Ains	+	-	
AA4	A	♂	Adult	16.11.2012	Ains	+	+	MK251021
BA5	B	♂	Adult	23.11.2012	Ains	+	+	MK251023
AA6	A	♀	Adult	19.10.2012	Ains	+	+	MK251022
AA7	A	♀	Adult	09.11.2012	Ains	+	-	
BA8	B	♀	Adult	09.11.2012	Ains	+	-	
BA9	B	♂	Adult	18.05.2012	Ains	+	-	
AA10	A	♀	Adult	16.11.2012	Apat	+	+	MK251020
BA11	B	♀	Adult	23.11.2012	Ains	+	+	MK251034
BA12	B	♂	Adult	09.11.2012	Ains	+	-	
BA13	B	♀	Adult	01.11.2012	Ains	+	+	MK251025
AA14	A	♂	Adult	02.11.2012	Ains	+	+	MK251026
BA15	B	♀	Adult	01.11.2012	Ains	+	+	MK251028
AA16	A	♀	Adult	19.03.2012	Ains	+	+	MK251027
BA17	B	♀	Adult	01.11.2012	Ains	+	+	MK251029
BA18	B	♂	Adult	09.11.2012	Ains	+	+	MK251030
BA19	B	♀	Adult	09.11.2012	Ains	+	+	MK251035
AA20	A	♀	Adult	09.11.2012	Ains	+	-	
BA21	B	♀	Adult	28.09.2012	Ains	+	-	
AA22	A	♂	Adult	16.11.2012	Ains	+	+	MK251031
AA23	A	♂	Adult	16.11.2012	Ains	+	+	MK251032
AA24	A	♀	Adult	16.11.2012	Ains	+	-	
AA25	A	♀	Adult	02.11.2012	Ains	+	+	MK251033
AA26	A	♂	Adult	19.10.2012	Ains	+	+	MK251024
Bsm1	B	♀	Adult	31.08.2012	Sazu	+	+	MK251009
ASm2	A	♂	Adult	26.07.2012	Sazu	+	-	
ASm3	A	♀	Adult	19.10.2012	Sazu	+	-	
ASm4	A	♀	Adult	05.10.2012	Sazu	+	+	MK251003
ASm5	A	♀	Adult	17.08.2012	Sazu	+	-	
Bsm6	B	♀	Adult	21.09.2012	Sazu	+	+	MK251006
Bsm7	B	♀	Adult	09.11.2012	Sazu	+	+	MK251007
ASm8	A	♂	Adult	14.09.2012	Sazu	+	+	MK251004
ASm9	A	♀	Adult	07.08.2012	Sazu	+	+	MK251005
Bsm10	B	♂	Adult	13.10.2012	Sazu	+	+	MK251010
Bsm11	B	♀	Adult	31.08.2012	Sazu	+	-	
Bsm12	B	♂	Adult	21.09.2012	Sazu	+	-	
ASm13	B	♀	Adult	07.08.2012	Sazu	+	+	MK251008
Bsm14	B	♀	Adult	21.09.2012	Sazu	+	-	
ASm15	B	♀	Adult	14.09.2012	Sazu	+	-	
Bsm16	B	♀	Adult	21.09.2012	Sazu	+	-	
ASm17	A	♀	Adult	05.10.2012	Sazu	+	-	
ASm18	A	♀	Adult	17.08.2012	Sazu	+	-	
ASf1	A	♂	Adult	19.10.2012	Sfin	+	+	MK251013
ASf2	A	♀	Adult	09.11.2012	Sfin	+	-	
ASf3	A	♀	Adult	14.09.2012	Sfin	+	-	
ASf4	A	♂	Adult	23.11.2012	Sfin	+	-	
ASf5	A	♀	Adult	09.11.2012	Sfin	+	-	

Code	Site	Sex	Life stage	Collection date	Morph	CHCs	COI	Accession Number
ASf6	A	♀	Adult	26.07.2012	Sfin	+	+	MK251012
ASf8	A	♀	Adult	09.11.2012	Sfin	+	+	MK251018
ASf9	A	♀	Adult	26.07.2012	Sfin	+	+	MK251016
ASf10	A	♀	Adult	08.09.2012	Sfin	+	+	MK251011
ASf11	A	♀	Adult	14.09.2012	Sfin	+	-	
ASf12	A	♀	Adult	14.09.2012	Sfin	+	-	
ASf13	A	♀	Adult	19.10.2012	Sfin	+	-	
ASf14	A	♂	Adult	08.09.2012	Sfin	+	+	MK251017
ASf15	A	♀	Adult	05.10.2012	Sfin	+	-	
ASf16	A	♂	Adult	14.09.2012	Sfin	+	-	
ASf18	A	♂	Adult	02.11.2012	Sfin	+	-	
ASf19	A	♂	Adult	16.11.2012	Sfin	+	-	
ASf20	A	♂	Adult	09.11.2012	Sfin	+	-	
ASc9	A	♀	Adult	02.11.2012	Sfin	+	+	MK251014
ASc13	A	♂	Adult	23.11.2012	Sfin	+	+	MK251019
ASc14	A	♀	Adult	26.07.2012	Sfin	+	+	MK251015
BSf7	B	♂	Adult	31.08.2012	Scar	+	+	MK251000
BSf17	B	♂	Adult	31.08.2012	Scar	+	+	MK250999
BSc1	B	♀	Adult	31.08.2012	Scar	+	+	MK250995
ASc2	A	♀	Adult	07.08.2012	Scar	+	-	
BSc3	B	♀	Adult	01.08.2012	Scar	+	-	
BSc4	B	♀	Adult	01.08.2012	Scar	+	-	
ASc5	A	♀	Adult	23.11.2012	Scar	+	-	
BSc6	B	♀	Adult	31.08.2012	Scar	+	-	
BSc7	B	♀	Adult	15.06.2012	Scar	+	-	
BSc8	B	♀	Adult	31.08.2012	Scar	+	+	MK251001
BSc10	B	♂	Adult	01.11.2012	Scar	+	-	
BSc11	B	♂	Adult	31.08.2012	Scar	+	+	MK250996
BSc12	B	♂	Adult	15.06.2012	Scar	+	+	MK250997
BSc15	B	♂	Adult	13.10.2012	Scar	+	+	MK251002
ASc16	A	♀	Adult	23.11.2012	Scar	+	-	
ASc17	A	♂	Adult	09.11.2012	Scar	+	-	
BSc18	B	♂	Adult	31.08.2012	Scar	+	+	MK250998
BSc19	B	♀	Adult	21.09.2012	Scar	+	-	
BSc20	B	♀	Adult	01.08.2012	Scar	+	-	
ASc21	A	♀	Adult	05.10.2012	Scar	+	-	
BSc22	B	♂	Adult	01.08.2012	Scar	+	-	
ASc23	A	♀	Adult	23.11.2012	Scar	+	-	
ASc24	A	♀	Adult	23.11.2012	Scar	+	-	
BSc25	B	♂	Adult	19.10.2012	Scar	+	-	
BSc26	B	♀	Adult	16.11.2012	Scar	+	-	

Abbreviations: morph = morphology-based classification; CHCs = characterization of cuticular hydrocarbon profile; COI = COI gene barcoding; + = used; - = not used.

Supp. Table II. List of cuticular hydrocarbons identified in *Oedipoda miniata mauritanica* (Omin), *Acrotylus insubricus insubricus* (Ains), *Acrotylus patruelis* (Apat), *Sphingonotus azurescens* (Sazu), *Sphingonotus finotianus* (Sfin), and *Sphingoderus carinatus* (Scar) collected in Sétif.

Compound identity	Peak number per species					
	Omin	Ains	Apat	Sazu	Sfin	Scar
n-C23	1	t	-	1	1	-
X	-	-	-	2	2	-
3-MeC23	2	-	-	-	-	-
n-C24	3	t	-	3	3	t
4/2-MeC24	4	-	-	-	-	-
n-C25	5	t	-	4	4	2
11-MeC25	6	-	-	5	5	t
diMeC25 (+5MeC25)		-	-	6	6	t
4-MeC25	7	-	-	-	-	
3-MeC25	8	-	-	7	7	t
n-C26	9	t	-	8	8	3
12-MeC26+X	T	-	-	t	t	t
4/2-MeC26	10	t	-	10	t	3a
n-C27	11	1	1	11	11	4
13-+11-MeC27	12	t	-	12	12	5
5-MeC27	13	-	-	13	13	5a
diMeC27		t	-	14	14	5b
4/2-MeC27	14	-	-	-	-	-
3-Me27	15	t	-	15	15	5c
n-C28	16	2	2	17	17	6
12-MeC28 +X	t	t	-	18	t	t
n-C29	18	4	4	20	20	10
15-+13-+11-MeC29	19	5	t	21	21	11
7-MeC29	t	t	-	22	22	11a
5-MeC29	t	t	-	23	23	11b
diMeC29	20	t	-	24	24	11c
4/2-MeC29		6	6			
3-MeC29	21	7	t	25	25	12
X				26	26	
n-C30	22	8	8	27	27	13
12-MeC30+X	23	t	-	28	28	t
4/2-MeC30	24	9	9	29	29	14
X	-	10	-	-	-	-
n-C31	25	11	11	30	30	18
4,12,16-triMeC30	-	12	t	-	-	-
15-+13-+11-MeC31 + X	26	13	t	31	31	19
9+7-MeC31	26a	T	t	t	t	-
5-MeC31	26b	T	-	t	32	t
x,y-diMeC31	27	15	t	32	32a	t
4/2-MeC31+X	28	16	16	-	-	-
3-MeC31	29	t	t	33	33	t
w,z-diMeC31	-	-	-	34	34	t
n-C32	30	18	18	35	35	22
X	t	t	19	-	-	-
14-+12-+11-+10-MeC32	-	20	-	36	36	23
14-+12-+11-+10-MeC32	-	20	-	36	36	23
6-MeC32	-	t	t	-	-	-

Compound identity	Peak number per species					
	Omin	Ains	Apat	Sazu	Sfin	Scar
diMeC32	-	21	t	-	-	-
4/2-MeC32	31	22	22	37	37	t
3-MeC32		t	-		38	t
X		t	-		38a	
n-C33	32	25	25	39	39	27
triMeC32	-	26	t	-	-	-
9-+7-MeC33		t	t	40a		30a
13,17+13,19-+13,21-diMeC33	-	29	29	-	-	-
11,17+11,19-+11,21-diMeC33	34	-	-	41	41	31
4/2-MeC33	-	t	30	-	-	-
7,15-diMeC33	-	-	-	41b	41a	32
13,17,21-triMeC33+3MeC33	35	-	-	42	42	32a
n-C34	36	31	31	43	43	33
triMeC33	-	t	t	-	-	-
X	36b	-	-	-	-	t
X	37	-	-	-	-	-
X	37b	-	-	-	-	-
X	38	-	-	-	-	-
13-+12-+11-MeC34	-	t	t	44	44	35
diMeC34	-	32	t	45	45	37
8,12,16-triMeC34	-	-	33	-	-	-
3-MeC34	-	-	-	-	t	-
4/2-MeC34	-	33	t			
X	-	34	t	t	-	
X	-	35	t	-	-	-
n-C35	39	36	36	46	46	40a
triMeC34+X	t	37	-	-	-	t
17-+15-+13-+11-MeC35	40	t	t	47	47	42
X	-	39	t	-	-	-
diMeC35	41	40	40	48	48	44
X	-	-	-	49	-	t
triMeC35	42	-	-	50	49+50	45
X		41	t	-	-	t
n-C36	42a	t	t	51a	51	47
14-+12-MeC36+X	t	-	-	52	52	48
dimeC36	-	-	-	53	53	49
trimethylC36	-	-	t	-	-	-
N	-	-	-	-	53a	t
n-C37	45	t	t	54	t	52a
19-+17-+15-+13-+11-MeC37	46	-	-	55	55	54
15,21+17,21-diMeC37	47	-	-	56	56	55
triMeC37	48	-	-	57	57	56
n-C38	t	-	-	58	t	58
14-+12-MeC38	49	-	-	59	t	59
diMeC38		-	-	60	t	60
n-C39	t	-	-	61	t	61a
19-+11-Me C39	50	-	-	62	62	62
diMeC29	-	-	-	63	63	63
triMeC29	-	-	-	64	64	-

The abbreviations are as follows: t, present in trace amounts; -, absent; and X, unknown.

