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Chromosome number and meioformulae in 36 species of Indian Coleoptera (Insecta)

(Cicindelidae/chromosomes/Coleoptera/meiotic formula/chrysomelidae)

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ABSTRACT The diploid number of chromosomes and meiotic formulae in 36 species from 16 genera belonging to 5 families of the two major sub-orders of Coleoptera from India have been tabulated.

Serrano and Yadav¹, in their world list of chromosome numbers of Adephaga, included just 7 species of *Cicindela* from India.²⁻⁵ Since all these species were characterized by having a multiple sex chromosome mechanism, it was considered worthwhile to look into a few more species. An appropriate opportunity arose when the University Grants Commission granted a project in 1984 to undertake chromosome studies on Coleoptera. The preliminary results obtained on 36 species from 16 genera belonging to 5 families of the two major sub-orders of Coleoptera are presented in Table 1.

A perusal of the literature reveals that chromosomal data on only 8 species of Elateridae, 3 unidentified^{3,6-14} and 3 species of Buprestidae, one unidentified^{15,9} are on record. Chrysomelidae, however, has been cytologically an extensively investi-

gated group and Petitpierre *et al.*¹⁶, in their world list, have listed 93 species from 45 genera of 10 subfamilies from India. Of the species under report, the chromosome numbers have been confirmed in *Cicindela (Calochroa) sexpunctata*³⁻⁴ from a different and distant locality, *Colasposoma ornatum*¹⁸, *C. semicostatum*¹⁹, *C. metallicum*²⁰, *Glyphocassis trilineata*²¹⁻²², *Lacoptera quadrimaculata*¹⁷⁻¹⁸ and *Apoderus sissu*.²³ The data on the remaining 29 species are new additions to the cytology of Coleoptera.

Details of the structure and behaviour of chromosomes during mitosis and meiosis in the species under report will be published elsewhere.

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TABLE 1
Classified list and chromosomal data of the species under report

Sr. No.	Species	Locality and period of collection	Diploid chromosome number	Meioformula
1	2	3	4	5
Sub-order-ADPHAGA				
Super-family-CARBOIDEA				
Family-Cicindelidae				
Subfamily-CICINDELINAE				
Genus-Cicindela L.				
1.	<i>Cicindela (Cosmodela) virgula</i> Fleut.	Pant Nagar (UP) June, 1986	23	10+XXY
2.	<i>C. (Cosmodela) duponti</i> Dej.	Haflong (Assam) April 1986	23	10+XXY
3.	<i>C. (Cosmodela) intermedia</i> Chaud.	Simla (H. P.) May 1986	21	9+XXY
4.	<i>C. (Lophyra) striolata</i> (Ill.)	Pant Nagar (U. P.) June 1986	23	10+XXY
5.	<i>C. (Lophyra) multiquittata</i> Dej.	Haflong (Assam) May 1986	23	10+XXY
6.	<i>C. (Lophyra) striatifrons</i> Chaud.	University Campus, Chandigarh, May 1985	23	10+XXY
7.	<i>C. (Lophyridia) funerea</i> Mac.	Haflong (Assam) April 1986	23	10+XXY
8.	<i>C. (Lophyridia) chloris</i> Hope.	Pant Nagar (U. P.) June 1986	23	10+XXY
9.	<i>C. (Cylindera) virdilabris</i> Chaud.	Dibrugarh (Assam) May 1986	21	9+XXY
10.	<i>C. (Cylindera) spinolae</i> Gest.	Gauhati (Assam) May 1986	21	9+XXY
11.	<i>C. (Cylindera) minuta</i> Oliv.	Silchar (Assam) April 1986	23	10+XXY
12.	<i>C. (Cylindera) cognata</i> Wied.	Silchar (Assam) April 1986	21	9+XXY
13.	<i>C. (Cylindera) bigemina brevis</i> W. Horn	Univ. Campus, Chandigarh May 1986	23	10+XXY
14.	<i>C. (Myrochile) undulata</i> Dej.	Pant Nagar (U. P.) June 1986	21	9+XXY

1	2	3	4	5
15.	<i>C. (Rivaliera) albina</i> Wied.	Dehra Dun (U. P.) July 1986	23	10+XXY
16.	<i>C. indica</i> Fleut.	Jorhat (Assam) May 1986	21	9+XXY
17.	<i>C. triquittata</i> Hbst.	Gauhati (Assam) May 1986	23	10+XXY
18.	<i>C. (Calochroa) sexpunctata</i> F.	Haflong (Assam) May 1986	23	10+XXY
POLYPHAGA				
CERAMBYCOIDEA				
Chrysomelidae				
EUMOLPINAE				
EUMOLPINI				
19.	<i>Colasposoma ornatus</i> Jac.	Pant Nagar (U. P.) June 1986	16	7+Xy _p
20.	<i>C. semicostum</i> Jac.	Pant Nagar (U. P.) June 1986	16	7+Xy _p
21.	<i>C. metallicum</i> Clark	Pant Nagar (U. P.) June 1986	16	—
CORYNODINI				
22.	<i>Platycorynus</i> sp.*	Kurukshetra (Haryana) Sept. 1980	28	13+Xy _p
CLYTRINAE				
CLYTRINI				
23.	<i>Epimela</i> sp.	Kurukshetra (Haryana) July 1980	22	—
24.	<i>Diapromorpha melanopus</i> Lacord.	Kurukshetra (Haryana) July 1980	22	10+Xy
25.	<i>Gynandrophthalma longicornis</i> Jac.	Kurukshetra (Haryana) July 1980	24	11+Xy _p
CASSIDINAE				
26.	<i>Aspidomorpha dorsata</i> F.	Haflong (Assam) April 1986	18	8+Xy _p
27.	<i>Glyphocassis trilineata</i> Hope	University Campus Kurukshetra Sept. 1986	16	7+Xy _p
28.	<i>Laccoptera quadrimaculata</i> Thunb.	Kalesar Forest (Haryana) Sept. 1986	18	8+Xy _p

1	2	3	4	5
	CURCULIONOIDEA			
	Curculionidae			
	APODERINAE			
	APODERINI			
29.	<i>Apoderus sissu</i> Marsh.	University Campus Kurukshetra (Haryana) August 1986	32	15+Xy _p
	EREMNINAE			
30.	<i>Hypomeces squamosus</i> F.	Kalesar Forest (Haryana) Sept. 1986	22	10+Xy _p
31.	<i>Hypomeces</i> sp.	Kalesar Forest (Haryana) Sept. 1986	22	10+Xy _p
	Buprestidae			
32.	<i>Trachys bicolor</i> Kerr.	Univ. Campus Kurukshetra (Haryana) August 1986	18	8+Xy _p
33.	<i>Sphenoptera</i> sp.	Pant Nagar (U. P.) June 1986	18	8+Xy _p
	Elateridae			
	PYROPHORINAE			
	PYROPHORINI			
34.	<i>Heteroderes lini</i> Candeze	Paonta Sahib (H. P.) Sept. 1986	17	8+XO
	CARDIOPHORINAE			
35.	<i>Cardiophorus</i> sp. Candeze. (Code No. 8866)	Univ. Campus Kurukshetra (Haryana) August 1986	22	10+Xy _p
	DICREPIDINAE			
36.	<i>Heterocrepidius mendex</i> Candeze.	Univ. Campus Kurukshetra (Haryana) July 1986	22	—

*Earlier known as *Corynodes*

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