

Table 1 Hypoglycemic and hypolipidemic effects of cabbage oil compared with those of insulin in streptozotocin diabetic rats (Mean value \pm S.D of six rats in each group)

Parameters studied	Diabetic groups				
	Normal	Untreated control	High insulin treated	Low insulin treated	Cabbage oil treated
Blood sugar mmol/l	4.6 \pm 0.6	20.0 \pm 2.0*	8.0 \pm 1.5*	9.0 \pm 2.0*	8.5 \pm 1.0*
Serum cholesterol mmol/l	3.4 \pm 0.2	6.2 \pm 0.3*	4.8 \pm 0.3*	5.5 \pm 0.3 [†]	3.5 \pm 0.2*
Liver cholesterol mmol/kg	18.0 \pm 3.0	26.0 \pm 2.0*	18.5 \pm 2.0*	22.4 \pm 3.0*	19.0 \pm 2.0*
Kidney cholesterol mmol/kg	2.5 \pm 0.5	6.2 \pm 1.5*	4.5 \pm 1.0	5.0 \pm 1.2	4.2 \pm 1.0
Serum triglyceride glycerol mmol/l	0.5 \pm 0.1	1.2 \pm 0.2*	0.75 \pm 0.12 [‡]	1.10 \pm 0.15	0.88 \pm 0.1 [†]
Liver triglyceride glycerol mmol/kg	10.0 \pm 2.0	20.0 \pm 3.0*	9.5 \pm 1.5*	12.0 \pm 2.0*	9.6 \pm 1.0*
Kidney triglyceride glycerol mmol/kg	3.0 \pm 0.5	11.0 \pm 2.0*	4.8 \pm 0.5*	5.7 \pm 0.4*	5.8 \pm 0.5*
Liver total lipids g/kg	31.0 \pm 2.9	40.0 \pm 5.0 [‡]	32.0 \pm 1.5 [†]	35.0 \pm 2.0	30.0 \pm 1.0 [‡]
Change in body wt g/100g	40.0 \pm 5.0	-16.0 \pm 2.0*	20.0 \pm 3.0*	10.0 \pm 2.0*	-8.0 \pm 2.0*

Negative value for change of body wt indicates loss of weight; Diabetic control is compared with normals and treated groups are compared with diabetic control. Level of significance is based on student's *t* test; [†]*P*<0.01; [‡]*P*<0.002; **P*<0.001.

high dose of insulin, except that it could not increase the body weight. The mechanism of action of the oil is not clear; however it could be similar to that of garlic oil. Tashiko *et al*¹¹ ascribed the hypocholesterolemic action of cabbage to a sterol but Itokawa *et al*⁴ and the present authors ascribe such action of cabbage to sulphur compounds.

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ADDITIONAL RECENT OSTRACODES FROM RAJASTHAN

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DURING a geological investigation (October 1986), 10 substrate samples were collected from 2 perennial

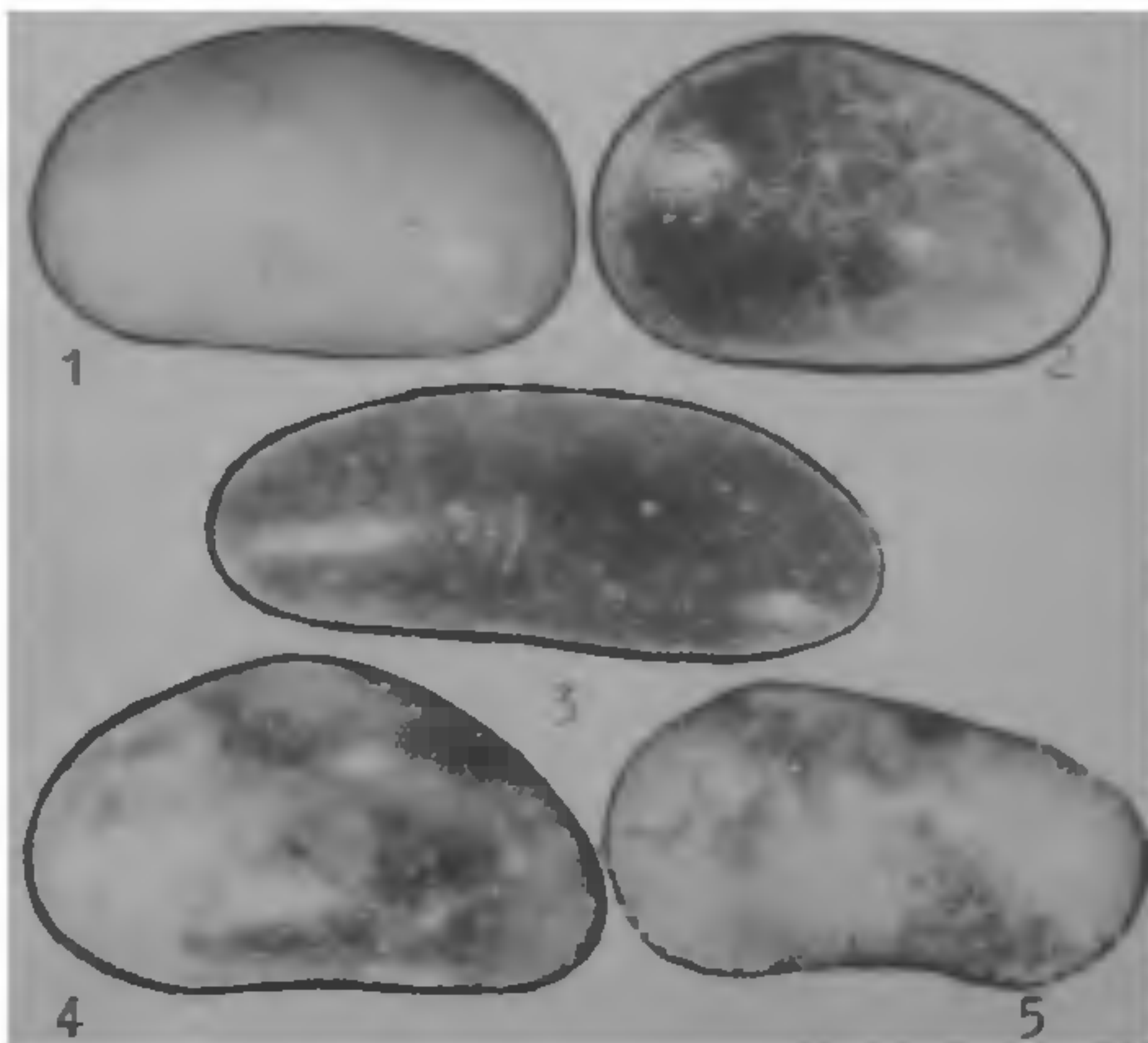
water ponds (Kawadsar and Bheemsar) near Manda and Khunyan villages (Lat. 27° 18'N; Long. 70° 55'E), 60 km north of Jaisalmer town in Rajasthan. These samples have yielded 10 ostracod taxa—*Cypris subglobosa* Sowerby, *Sclerocypris jaini* Bhatia and Mannikeri, *Hemicypris fossulata* (Vavra), *Stenocypris hislopi* Ferguson, *Ilyocypris mckenziei* Bhatia and Mannikeri, *Ilyocypris bradyi* Sars, *Hemicypris* sp., *Hemicypris pandei* Bhatia and Singh, *Parastenocypris* sp. and *Potamocypris minuta patriciae* Bhatia. Of these the former five are already known from other parts of Rajasthan and the latter five (figures 1–5) are now recorded for the first time from Western India. These ostracodes are found associated with gastropod shells and chara oogonia. The substrates of the water ponds (supra cit) consist of buff-coloured sandy mud or silt with abundant aquatic vegetation. The maximum and the minimum depth of water varies between 3 m (rainy season) and 1 m (summer).

There are very few studies on ostracodes of Rajasthan and the detailed work¹ on "Asiatic Ostracodes" includes 2 taxa from Jodhpur (*Strandesia parva* and *Stenocypris* sp.). This was followed by the record² of 3 species (*Cypris subglobosa*, *Cypridopsis* sp. and *Stenocypris major*) from ponds near Sri Kolayatji in Bikaner District. Two new species (*Sclerocypris indica* and *S. rajasthanensis*) from Biprasar tank were also recorded³ near Ramgarh village in Jaisalmer District. Nine taxa including 2 new species (*Ilyocypris mckenziei* and *Sclerocypris*

jaini) from Gadisar lake near Jaisalmer town were also reported⁴.

Cypris subglobosa, a species known to occur in various parts of India, Afghanistan and Iran, limiting to Holarctic and Oriental zoogeographic provinces, is characterized by ventrolateral inflation with an anterior conspicuous 'lip' in the right valve. It ranges in age from Pleistocene to Recent. The genus *Sclerocypris*, till recently considered as endemic in S. Africa, has been recorded in Rajasthan lakes with 3 taxa—*S. rajasthanensis*, *S. indica* and *S. jaini*. They are distinguished by their large and heavy shells with burrowing habit. The genus *Hemicypris*, widely occurring in India in the Recent lakes and late Pleistocene sediments, is represented here by *Hemicypris* sp. (figure 1), *H. Pandei* (figure 2) and *H. fossulata*. The former may possibly belong to a new taxon. The former 2 taxa occur in the Oriental and the latter one occurs in both the Oriental and Ethiopian provinces. *S. hislopi*, typically with its strongly calcified valves and 'S' shaped radial pore canals, is an active swimmer over the muddy bottoms of stagnant water pools⁵ and is restricted to the Oriental province. *Parastenocypris* sp. (figure 3) with its thin and fragile valves and a very narrow duplicature rarely occurs in Rajasthan lakes, may possibly belong to a new species. *Potamocypris minuta patriciae* with its small-sized delicate valves is poorly represented in the present material (figure 4). It is also known from Pleistocene epoch. Two taxa, *Ilyocypris mckenziei* and *I. bradyi* (figure 5), being recorded here, are characteristic swimmers of running water. The former one, typically with its posterodorsal hump and 2 rows of marginal spines is at present known only from the Recent freshwater lakes in Rajasthan. The latter species being a cosmopolitan form with compressed valves is known from Recent lakes and Pleistocene deposits in various parts of the Oriental zoogeographic province.

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Figures 1-5. 1. *Hemicypris* sp. ($\times 38$); 2. *H. Pandei* ($\times 44$); 3. *Parastenocypris* sp. ($\times 34$); 4. *Potamocypris minuta patriciae* ($\times 60$); 5. *Ilyocypris bradyi* ($\times 50$); All figures left valve view.

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