

DIETARY BIODIVERSITY IN *YĀJÑĀVALKYA-SAMĀHITĀ*

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Analytical studies of texts written in Sanskrit language reveal different aspects of relationship of human beings with the biodiversity in ancient India. The *Yājñavalkya-samhitā*, an ancient (c. 100 AD to 200 AD) Sanskrit text, contains discussions on plants and animals including the measures of their conservation. The text also includes, in the first chapter, deliberations on the edibles and non-edibles of the *dvijas*, and on the food-articles capable of satisfying the manes for different periods of time. These have been collected and analysed to estimate the range of biodiversity, permitted by Yājñavalkya, as diet. It has been observed that Yājñavalkya's instructions on food provide for a balanced diet of man and at the same time go a long way to conserve the biodiversity.

Key words: Biodiversity, Conservation, Edibles, Non-edibles, *Yājñavalkya-samhitā*

INTRODUCTION

Biodiversity is a natural attribute of an area. The term 'Biodiversity' refers to the total number of species, genera, families of plants and animals existing in that particular area. The microbes are also included in 'Biodiversity'. The Convention on Biological Diversity (CBD) defines biodiversity as the variety and variability among living organisms from all sources (terrestrial, marine and aquatic ecosystems) and the ecological complexes of which they are a part. This includes diversity within species, between species and of ecosystems and constitutes resources upon which humanity depends. The living standard and culture of human societies, all over the earth, have been influenced by ambient biodiversity throughout the ages. Modern human societies are also no exception.

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In recent times, with the degradation of environment, 'Biodiversity' has become an important area of scientific studies. Most of the scientists put in endeavours to get answers to the following three queries: (a) what elements of biodiversity (i.e. number of families, genera, species, varieties of plants and animals) are still available in the region of study, (b) how these elements can be utilized to improve the quality of human life, and (c) how to conserve these elements of biodiversity for further use in future¹. Jain² invites attention to the need of studying the cultural dimensions of biodiversity for comprehending the total relationships of the bioresources with human societies. He continues that 'the strongest intent and concern of all cultures has been to satisfy hunger³. This observation indicates the importance of studying the dietary biodiversity.

In India more than four hundred Scheduled Tribes of different ethnicity live in diverse ecological niché. Naturally the constituents of their diets vary. Divergence in the selection of elements of diet depends not only on the shape, colour, odour, taste, and nutritional value of the biological entities available in a particular area, but also the philosophical perception of the respective human society about other living forms plays major role in determining the attitude of humans towards them. Each societal segment develops lists of edibles, inedibles, and its own code of diet. In unlettered societies these instructions pass on orally from generation to generation, but societies equipped with scripts put them in writing. In ancient India the social thinkers recorded their observations and instructions on social discipline, including the same on food, in the texts. Thus it appears that the texts written in ancient languages of India may enlighten about the dietary biodiversity. Sensarma⁴ explains the need and importance of analysing the texts written in Sanskrit.

The texts written in Sanskrit are large in number, diverse in contents, and belong to different categories, e.g. Epics, Dharmasāstras, Purāṇas, etc. Further, these were written/compiled in various parts of India and in different centuries. For these reasons, Sanskrit texts belonging to the same category should be studied one by one, and, if possible, following the sequence of time of origin of the texts. For the present work, the *Yājñavalkya-saṃhitā*, a text believed to have been compiled during the first two centuries of the Christian era or even earlier⁵, has been selected. The attributes and importance of this metrical smṛti text have been briefly enumerated elsewhere by the present author⁶.

MATERIALS AND METHOD

The data regarding dietary biodiversity, are scattered in the different verses of the first chapter of the Bangabasi edition of the text, edited by Tarkaratna (1316

BS)⁷. The data have been recorded in this article under the following heads : edibles (Table I), non-edibles (Table II) of the *dvijas*, i.e., the three upper *varnas* (castes), viz. Brāhmin, Kṣatriya and Vaiśya, and foods for satisfaction of the manes (Table III). The data, in the tables, have been further subdivided into (A) plants and plant parts, and (B) animals and animal products.

References to the respective chapter and verse(s) have been given along with each information. The Sanskrit names of the plants and animals, as mentioned in the text, have been retained in this article, while the common English and Latin equivalents of the same, wherever possible, have been given in parenthesis.

ENUMERATION OF INFORMATION

The *Yājñavalkya-samhitā* does not mention any criterion for selecting the dietary articles. From the contents of the text, however, it appears that it considers a handful number of plants, animals and animal products, fit to be ingredients of normal diet.

The text states (1.166-167), in general terms, that the following types of food should not be eaten - *anarcita* (neither worshipped nor offered with respect to some adorable one), *vr̥thāmāṃsa* (meat not offered to gods/manes), *śukta* (food which is normally sweet in taste but turned sour for some reason), *paryuṣita* (stale), *ucchiṣṭa* (left in the utensil after eating), containing hair/worm, touched by a dog or by a woman in her menses, smelled by cow, left by bird, seen by some depraved person, *saṃghuṣṭa* (offered to a person after exclaiming who would eat this), *paryāyānna* (meant for one person given to some other), and deliberately touched by foot.

It is interesting to note that the list of dietary articles, mentioned in the text, fit for satisfaction of manes, however, is comparatively long.

Table I : Edibles for the *Dvijās*

Sl. No.	Name of Plant(s)/Plant part(s)	Reference
A.	<i>Plant(s) and Plant part(s)</i>	
	1. Powder of <i>Yava</i> (barley : <i>Hordeum vulgare</i>) <i>Godhuma</i> (wheat : <i>Triticum vulgare</i>) - even when they are old and not treated with fat.	1.169

Sl. No.	Name of Plant(s)/Plant part(s)	Reference
B.	<i>Animal(s) and Animal Product(s)</i>	
1.	Among the five-nailed animals the following can be consumed : <i>sedhā</i> (porcupine or porcupine-like animal), <i>godhā</i> (iguana: <i>Varanus</i> sp.), <i>kacchapa</i> (tortoise : <i>Testude</i> sp.), <i>śallaka</i> (hedge hog : <i>Hystrix indica</i>), <i>śaśa</i> (hare/rabbit : <i>Lopus nigricellis</i>).	1.177(a)
2.	The following fishes are edible : <i>siṅghatuṇḍa</i> (lion-faced: <i>Bagarius bagarius</i>), <i>rohita</i> (rohu : <i>Labeo rohita</i>), <i>pāṭhīna</i> (a kind of large cat-fish akin to the flounder: <i>Wallage attu</i>), <i>rājīva</i> according to Apte ⁸ it refers to a type of deer, a crane and also an elephant, but Monier Williams ⁹ holds it as a species of fish), and all scaly fishes.	1.177(b)-178(a)
3.	According to the text, under the following conditions, consumption of meat is no fault: a) to sustain life, b) meat offered in <i>śrāddha</i> to please the mane(s)/god(s), and /or <i>Yājñā</i> , and to Brahmins.	1.179
4.	Milk and milk products.	1.169

Table II. Non-Edibles for the *Dvijas*

Sl. No.	Name of Plant(s)/Plant part(s)	Reference
A.	Plant(s) and Plant part(s)	
1. (a)	<i>Śobhāñjana</i> (horse radish : <i>Moringa oleifera</i>), <i>kavaka</i> (fungi growing on trees), <i>chatrāka</i> (mushroom), <i>palāṇḍu</i> (onion: <i>Allium cepa</i>), <i>laśuna</i> (garlic: <i>Allium sativum</i>), <i>grñjana</i> (carrot: <i>Daucus carota</i>) ;	

Sl. No.	Name of Plant(s)/Plant part(s)	Reference
	(b) blood-coloured exude of a tree, extract obtained by cutting a tree;	1.171 to 176
	(c) none of the following should be consumed before offering the same to god(s): <i>kṛsara</i> (rice boiled with sesame/ <i>mudga</i> - a kind of pigeon-pea), <i>sañjāva</i> (powdered wheat boiled with <i>ghṛta</i> - clarified butter, mollasses, etc.), <i>apūpa</i> (sweet pie), <i>śaskuli</i> (a kind of baked cake or rice-gruel), <i>pāyasa</i> (rice-porridge).	
B.	<i>Animal and Animal Products</i>	
1.	<i>Anirdeśa</i> (milk obtained from a cow within ten days of calving,	1.170
2.	Milk of	
	a) <i>sandhinī</i> (cow in heat),	1.170
	b) <i>avatsago</i> (cow without calf),	
	c) <i>uṣṭra</i> (camel : <i>Camelus</i> sp.),	
	d) <i>aḥa</i> (nannygoat :	
	e) <i>avika</i> (sheep : <i>Ovis ammon</i>), and all one-hoofed animals.	
3.	Milk of all wild animals except <i>mahiṣa</i> (buffalo: <i>Bubalus bubalis</i>) and women.	1.170
4.	<i>Ṛthāmāṇsa</i> (meat not offered to gods/manes).	1.166
5.	<i>Anupākṛtamāṇsa</i> (meat not offered in sacrificial rite).	1.171
6.	<i>Kravyādapakṣmi</i> (carnivorous bird), <i>dātyūha</i> (moorhen: <i>Gallinila chloropus</i>), <i>śuka</i> (parrot: <i>Psittacula krameri</i>), <i>pratuda</i> (beak-pecker birds), <i>ṭittibha</i> (according to Monier Williams ¹⁰ , it means parra jacana, thus it may be <i>Hydrodhasianuf chirurgus</i> or <i>Metapigius indica</i> ; some others hold	

Sl. No.	Name of Plant(s)/Plant part(s)	Reference
	it to be francoline partridge meaning <i>Francolinus</i> sp.), <i>sārasa</i> (egret or heron : <i>Bubulcus ibis</i> or <i>Ardea cinerea</i> / <i>A. purpurea</i>), <i>hamsa</i> (swan: <i>Anser anser</i> / <i>A. indicus</i>), all one-hoofed animals, and all birds which normally live in villages.	1.172
7.	<i>Koyaṣṭi</i> (according Monier Williams ¹¹ a small white crane, commonly called a paddy-bird), <i>plava</i> (Monier Williams ¹² holds it as a kind of aquatic bird), <i>cakrāhva</i> (Tarkaratna ¹³ translates it as <i>cakravāka</i> i.e. ruddy sheldrake : <i>Tadorna ferruginea</i>), <i>balākā</i> (common teal : <i>Nettion crecca</i>), <i>baka</i> (egret or heron : <i>Bubulcus ibis</i> or <i>Ardea</i> sp.), <i>biṣkīra</i> (Tarkaratna explains ¹⁴ it as <i>cakora</i> i.e. Greek partridge : <i>Perdix rufa</i>).	1.173a
8.	<i>Kalaviṃka</i> (sparrow: <i>Passer</i> sp.), <i>kākola</i> (raven: <i>Corvus corax</i>), <i>kurava</i> (a type of eagle), <i>rajjudālaka</i> (a kind of wild fowl), <i>jālapāda</i> (web-footed birds), <i>khañjarīta</i> (wag tail: <i>Motacilla alba</i>) and all unknown animals and birds.	1.174
9.	<i>Cāṣa</i> (blue-jay: <i>Coracias benghalensis</i>), <i>rakta pāda</i> (red footed birds), <i>sauna</i> (meat collected from slaughter house), <i>vallura</i> (dried meat), and fish	1.175
10.	<i>Viḍvarāha</i> (wild boar), <i>gramyakukkuṭa</i> (domestic fowl).	1.176

Table III. Dietary Articles for Satisfaction of Manes

Sl. No.	Name of the Article	Satisfactory for the period of	Reference
A.	<i>Plant and Plant-parts</i>		
1.	Tila (sesame : <i>Sesamum indicum</i>), vrihi (peddy: <i>Oryza sativa</i>)	one month	1.258(a)

Sl. No.	Name of the Article	Satisfactory for the period of	Reference
2.	<i>Mahāsāka</i> (according to Tarkaratna ¹⁵ it is <i>kālaśāka</i> , which means a potherb, preferably holy basil, i.e. <i>Ocimum sanctum</i>).	Indefinite period	1.260
<i>B. Animals and Animal Products</i>			
1.	Fishes	Two months	1.258(b)
2.	Flesh of		
	(a) <i>Hariṇa</i> (deer: since there are five genera available in India, it is difficult to determine the exact equivalent),	Three months	1.258(b)
	(b) <i>Urabhra</i> (sheep: <i>Ovis ammon</i> / <i>O. orientalis</i>),	Four months	1.258(b)
	(c) <i>Śākuna</i> (according to Tarkaratna ¹⁶ it refers to the birds edible by <i>dvijas</i>),	Five months	1.258(b)
	(d) <i>Chāga</i> (goat: <i>Hemitragus jemlanicus</i>),	Six months	1.258(b)
	(e) <i>Pṛṣata</i> (spotted deer: <i>Axis axis</i>),	Seven months	1.258(b)
	(f) <i>Eṇa</i> (according to Tarkaratna ¹⁷ it is <i>kṛṣṇasāra</i> i.e. black buck : <i>Antelope cervicapra</i>),	Eight months	1.259
	(g) <i>Ruru</i> (a kind of spotted deer or black buck i.e. <i>Antelope cervicapra</i>),	Nine months	1.259

Sl. No.	Name of the Article	Satisfactory for the period of	Reference
(h)	Varāha (wild boar: <i>Sus scrofa</i>),	Ten months	1.259
(i)	Śaśa (hare: <i>Lepus nigricolis</i>),	Eleven months	1.259
(j)	<i>Khaḍga</i> (rhinoceros: <i>Rhinoceros unicornis</i>),	Indefinite period	1.260(a)
(k)	<i>Mahāśalka</i> (a type of fish with large scale : <i>Tor tor</i>),	Indefinite period	1.260(a)
(l)	<i>Lohāmiṣa</i> (red meat),	Indefinite period	1.260(a)
(m)	<i>Vādhṛīṇasa</i> (according to Haradatta ¹⁸ , a commentator of <i>Āpastamba Dharmasūtra</i> it refers to a kind of bird having the nose resembling leather; Banerji ¹⁹ maintains that it means rhinoceros or old goat or a type of bird; Tarkaratna ²⁰ explains it as a old white coloured goat).	Indefinite period	1.260(a)
3.	<i>Pāyasa</i> (sweetened rice porridge)	One year	1.258(a)
4.	<i>Madhu</i> (honey)	Indefinite period	1.260(a)
5.	Munyanana (the food of ascetics).	Indefinite period	1.260(a)

DISCUSSION AND CONCLUDING REMARKS

On the basis of the above information it may be said that the *Yājñavalkya-saṃhitā* considers only a small number of plants and animals, belonging to higher groups, as edible. The lists of edibles and inedibles mentioned in this text bear close similarities with the same referred to in the *Manu-saṃhitā*²¹. Of course, while the *Manu-saṃhitā* (5.18) considers rhinoceros (*khaḍga*) as edible, the *Yājñavalkya-saṃhitā* does not mention it. It may be stated here that the people coming under the pale of Vedic culture do not consume the flesh of rhinoceros. Both these

Dharmaśāstras, however, are of the opinion that the flesh of rhinoceros, if offered properly, can cause satisfaction of the manes for an indefinite period. It may be recalled that it is emphasized that meat offered to manes in appropriate manner should be eaten by the mortal men. Thus the *Yājñavalkya-saṃhitā* admits, albeit indirectly, that the flesh of rhinoceros is edible.

It is interesting to note that the lists of dietary articles for satisfaction of manes mentioned in the *Yājñavalkya-saṃhitā* and *Manu-saṃhitā* are identical in all respects.

The instructions about the dietary biodiversity in the *Yājñavalkya-saṃhitā* are less elaborate and comprehensive than the same contained in the *Manu-saṃhitā*. The lists of edibles, mentioned in these two texts, however, provide for balanced diet of man; while the directions about the inedibles of the *dvijas* and dietary articles for satisfaction of manes moderate the food-habit of man without being oblivious about man's desire of eating various types of meat and fish. The merits and demerits of the dietary articles, mentioned in *Yājñavalkya-saṃhitā*, have been discussed by the present author in his dissertation on the *Manu-saṃhitā*²².

The commands of *Yājñavalkya* about the dietary biodiversity regulate the wanton anthropogenic assaults on the biodiversity and thereby help the conservation of natural biodiversity. It may be said that the socio-cultural rites and practices go a long way to conserve biodiversity. This observation brings to the fore the importance of studying the man-biodiversity interrelationships for comprehending the significance and mechanisms of conservation of biodiversity.

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