प्रा.सुरेश आत्माराम दिवाण,
मराठी विभाग
सदाशिवराव मंडलिक महाविद्यालय,मुरगूड
दि. ०२ऑगस्ट २०२०

E-Notes

बी.ए. भाग ३ मराठी

जून २०२० पासून बदललेल्या अभ्यासक्रमावर आधारीत

अभ्यासपत्रिका क्रमांक ९ सत्र : ५

अभ्यासपत्रिकीचे नाव : **मध्ययुगीन मराठी वाड;मयाचा इतिहास** (प्रारंभ ते इ.स.1500)

विभाग : 1

घटक 1 : मराठी वाड;मयाचा प्रारंभकाळ ते इ.स.१२०० पर्यंत

अ) विवेकसिंघूपूर्वकालीन रचना

कुवलयमाला,मानसोल्लास, राजमतिप्रबोध,अमरनाथ संवाद
गोरक्षगीता इ.

बहुतेक भारतीय साहित्यिकांचे सुप्रसिद्ध लेखक होते. हलकित गा सट्टासई (गाथा सप्तशती) ही एक प्रसिद्ध *कविता आहे* . यात 400 प्राकृत कथांचा संग्रह आहे. 'हॉल' व्यतिरिक्त, 'गाथा सट्टासई' च्या कर्ताचे नाव 'सलाहाना' आणि 'सातवाहन' देखील आढळते.

परिचय :

संस्कृत महान कवी बाण , प्रसन्न झालेया कामातील कावन किंवा सुभाषित कोश आणि त्याकर्त्याचा उल्लेख सातवाहनाच्या नावावर आहे. हे कार्य मूळतः निवडलेल्या प्राकृत श्लोकांचा संग्रह आहे. हळूहळू त्यात सातशे गाठ्यांचा समावेश झाला आणि ते सत्सई म्हणून प्रसिद्ध झाले. तथापि, त्याच्या कर्त्याचे नाव एकसारखेच राहिले. आदिंच्या तिसऱ्या गाथामध्ये असे आढळले आहे की या रचनांमध्ये, हेले यांनी एका श्रेणीतून 400 शोभेच्या गाथा निवडल्या आणि तयार केल्या. सत्साईंच्या रचनेचा कालावधी अनिश्चित आहे. होय, बाणाच्या उल्लेखानंतर इतके स्पष्टपणे म्हटले जाऊ शकते की त्याचे संकलन गाटाकोशच्या रूपात ख्रिस्ताच्या सातव्या शतकापूर्वी केले गेले होते. सातवाहनाचे समांतर शालिवाहन देखील आहे ज्याचा संबंध इ.स. मध्ये प्रारंभ झालेल्या संवतशी संबंधित असल्याचे आढळते. वायु, विष्णू, भागवत इत्यादि पुराणात अंधश्रुत नावाच्या राजांची वंशावळ आढळली आहे, त्या राजाचे नाव पहिले सातवाहन आहे.आणि 14 व्या राजाचे नाव सापडले आहे. या घराण्याचा प्रभाव गुप्त राजवंशापूर्वी

पश्चिम भारतातील ख्रिस्ताच्या पहिल्या तीन-चार शतकानुशतके आहे. त्यांची राजधानी प्रतिष्ठानपूर (आधुनिक वाचन) होती.सातवाहन (हॉल) कुतूहल कविकृत प्राकृत हा 'लीलावई' या काव्याचा नायक आहे. जैन कवी उद्योगातसुरी यांनी त्यांच्या 'कुवलयमाला कथा' (सका)००) मध्ये पलिता (पादलप्त) आणि छप्पन्न या कवींसोबत सलहना कवीची स्तुती केली आहे, तसेच ताराणवती कथेचे कर्ता पालिट्टा (पौडलिपट्टा) यांच्या कवितांमध्ये असेही म्हटले आहे सुंदर असायच्या. हे 600 संशयापूर्वी अलीकडील कीर्ती दर्शवते.

हलीटक सट्टासाईंच्या बर्याच भाष्यांपैकी दोन टीका, पीतांबरा आणि भुवनपालिकाईत विशेष प्रसिद्ध आहेत. पाळिताक, प्रवर्सेना, सर्वसेन, पोट्टीम, कुमारिल इत्यादी कवींची नावे सापडलेल्या तीनशेहून अधिक गाथांमध्ये कर्त्यांचा उल्लेखही आढळतो.

सात्तासाईंचे सुभाषित हे सर्व पुरातन साहित्यात सुंदरता आणि गोड कल्पनांसाठी अनन्य मानले जाते. त्यांच्यामध्ये, नर व मादी नरांच्या वर्तनाची आणि जलाशयांवर इत्यादी आणि स्त्री-पुरुषांच्या वागणुकीची सुंदर झलक दिसते आणि सामान्यत: लोकजीवनाच्या सर्व बाजूंनी. या अलीकडील कार्याचा भारतीय साहित्यावर गंभीर परिणाम झाला आहे. वक्तृत्व मध्ये त्याचा अवतार दृष्टांत रूपात आढळतो. संस्कृतमधील सप्तशती आणि हिंदीमध्ये तुलसी सत्साई, बिहारी सत्सई इत्यादी याच आदर्शांवर रचल्या आहेत.

मन्सोल्लास या ग्रंथा बाबत.

मानसोलस (मानस + उल्लास = मनाची उत्साहीता) हा १२ व्या शतकातील एक महत्त्वाचा संस्कृत मजकूर आहे, ज्याचा लेखक चालुक्य घराण्याचा राजा सोमेश्वर तिसरा आहे . त्याला 'अभिलाचितरचिंतामणि' असेही म्हणतात. हे 1129 एडी मध्ये बनले होते. या पुस्तकात राजाच्या 100 विनोदांचे वर्णन संकलित केले आहे. यात गाणी, वाद्ये, नृत्य, उपयुक्ततेचा तपशील आणि पूर्वीच्या समाजातील प्रमुख तत्त्वे आहेत. चालुक्य वंशी राजा सोमेश्वर यांनी स्वत: हे पुस्तक लिहिले हे अतिशय महत्त्वाचे सत्य आहे. ऐतिहासिक क्रमानुसार, राजाची पद्धतशीर मूल्यांकन आणि संगीताच्या विविध आयामांच्या अभ्यासामध्ये विशेष रुची समाजातील संगीताचे स्तरीय महत्त्व स्पष्ट करते.

हे 100 अध्यायांसह मोठे पुस्तक आहे. खरं तर, हा जगातील पहिला विश्वकोश आहे .

हे पुस्तक पाच 'विनशती' मध्ये विभागलेले आहे. प्रत्येक कथेत वीस अध्याय आहेत. प्रत्येक अध्याय एका विशिष्ट विषयाचा अभ्यास करतो. पाचव्या विन्शहाटीचे नाव 'क्रीडाविणशती' आहे ज्यामध्ये दरबारात खेळल्या जाणार्या खेळांचे वर्णन केले जाते. यात 'पास्कक्रिडा', 'गोल्काक्रिडा' इत्यादींचा समावेश आहे.

या पुस्तकात, विविध विषयांचे वर्णन केले गेले आहे, जसे की राज्यत्वाचे साधन, राज्यात स्थिरता स्थापित करणे, राजाचा विनोद इ. यात भारतीय कला , हस्तकला, भोजन, दागदागिने, खेळ, संगीत

आणि नृत्य यांच्याशी संबंधित अमूल्य माहिती आहे. या पुस्तकातील श्लोकांची संख्या खालीलप्रमाणे आहे -

दोष	धडा	श्लोक क्रमांक
1 अधिग्रहण राज्य	20	308
2 राज्य स्थिरीकरण त्रुटी	20	1300
3 वाजवी त्रुटी	20	1820
4 विनोद विंची	20	3219
5 क्रीडा कौशल्य	20	1375

MANASOLLSA – The Rules Guide
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Somesvara III, was ruled at Kalyana in the twelfth Century A.D., is one such luminary. His work Manasollasa is a well-known encyclopedic work in Sanskrit literature. This work was composed in Sanskrit verses by Somesvara-III (1127-1138 AD), a distinguished scholar. He was the son of the great king Vikramaditya VI. Somesvara proved to be a monumental figure in the history of Chalukyas, who ruled at Kalyana in Karnataka, India from the 10th to the end of the 12th Century. This work “Manasollasa” or “Abhilasitarthacintamani” has elaborate information from almost all branches of ancient lores. Hence it serves as a storehouse of information on all leading topics of learning. This interesting work is useful to the common man to lead a peaceful life. Manasollasa propounds timetested knowledge, and accordingly gives fresh inspiration to human beings even in changing times. It consists of five Prkaranas of twenty chapters each of unequal length and encompasses several related subjects on almost all the Prakaranas. The topics explained in the first Prakarana are general and religious ethics, social service, manufacture of idols, diseases and their remedies. In the second Prakarana, polity is treated in detail under seven different heads. Law, both private and interstate, and other aspects such as peace, war, invasion, neutrality, and alliance, are also dealt with. The third Prakarana is devoted to the description with minutest details of architecture, picture-drawing, painting, iconography and pleasure of domestic life. The fourth and fifth Prakaranas explain the various forms of amusements and entertainments. Incidentally, brief reference is also made to arithmetic, decimal notations, preparation of calendars, astrology, omens, augury, palmistry, training of horses and elephants along with the treatment of their diseases, mining, alchemy, gems and precious stones, marriage and child-rearing, cookery, liquor, beverages, music, conveyance, scents and so on. The matter from Manasollasa included in this paper gives a summary of the life, date and works of Somesvara III. According to Somesvara social services, ethics, education, health, justice and the role of Administrator are very important in the welfare state. Education, imparted with devotion and dedication, enables a society to be mentally alert to face increasing challenges posed by the changing times. Health, meticulously guarded, keeps the society physically fit and mentally calm and peaceful to utilize all energies for the well-being of mankind.

Somesvara opines that the well-being of State depends upon mental, physical and social health of its subjects. Mental health depends upon the imparting of all round education aimed at intellectual, emotional and spiritual advancement of all people in the Society. Physical health is assured by taking timely precautions in warding off diseases. Social health is assured by the dispensation of speedy and impartial justice without fear or favour. Somesvara has indeed given us considerable information about his ancestors, original home, learning and the date of the Manasollasa. The date of composition of this work is 1051 Saka i.e., 1129 A.D. According to Prof. B. R. Gopal, it is completed in 1130 A.D. Dr. Mishra opines, Manasollasa was composed by Somesvara III in 1129 A.D. King Vikramaditya VI and Queen Chandraladevi are parents of Somesvara. Vijayapura was the capital of the Calukya of Kalyana. Vikramaditya had left nothing to be achieved afresh by his successor. 'Vikaramanakabhudayam' was the second work of Somesvara. This work, one of the very few of this kind in Indian languages deals specially with Karnataka. In this paper the selected portion from the Manasollasa here seeks to focus attention on the richness and vertices of the contents of this encyclopedic Sanskrit work

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On Elephants in Manasollasa – 1. Characteristics, Habitat, Methods of Capturing and Training

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Abstract

Hastishastra or the science dealing with elephants originated in India. Kings in ancient India maintained a separate division of manned elephants in their armies besides the foot soldiers, chariot riders, and horse riders. Capturing elephants from forests, managing them, treating their ailments, and training for various purposes formed an important activity in most kingdoms. Hastyayurvedasamhita (a manual of the science of elephant-life), a work by the sage Palakappya, is an ancient text that has been preserved in the Raja Serfoji Saraswathi Mahal Library of Thanjavur in Tamil Nadu. The encyclopedic work, Manasollasa, or Abhilashitarthachintamani has been ascribed to the Western Chalukya King, Someshvardeva or Somadeva III, who ruled in the twelfth century AD. A large number of verses deal with elephants and their management. For the first time ever, these verses have been translated into English in this article with a discussion. This paper is the first in a series of three articles. Introduction about the science and its antiquity The word Hastishastra (a science dealing with elephants) can be translated into English as "Elephantology". The science deals with topics like the genealogical, physical, mental and intellectual characteristics of elephants, techniques of tracing and capturing elephants from forests, nourishment for healthy growth and general upkeep, taming and training them for war and work, and diagnosis and treatment

of their diseases. It was seriously studied in India since very ancient times in great details and has a continuous written and oral tradition. Of the two species of elephants, viz., the African and the Asian, known to the modern naturalists, the ancient Indian scholars understandably observed and studied only the latter, technically called Elephas maximus Linn. The ancient Indian kings maintained huge armies in which foot soldiers, and warriors riding in chariots, on horsebacks, and on elephants formed the four divisions. Breeding, maintaining, and training horses and elephants and studying and treating their ailments, therefore, occupied a place of vital importance in maintaining law and order and in the defense of the state. As a result, the kings employed scholars and experts who investigated this branch of veterinary science, right from the early days. Their knowledge was based on experience and was an outcome of their direct observations and experiments. It was not a mere fanciful theorizing as is evident from the detailed and practical instructions for the maintenance of these animals, which the works on the subject contain. Hastyayurvedasamhita (A manual of the science of elephant-life), an ancient work of unrecorded date by sage Palakappya, is an important text on the subject preserved till date, a copy of which is available in the Raja Serfoji Saraswathi Mahal Library of Thanjavur in South India. The work consisting of over seventy-two chapters deals systematically with several diseases of elephants grouping them suitably into different categories. It also contains valuable instructions for the healthy growth, upkeep and training of elephants. The author is stated to have taught this science to king Romapada of Anga (probably parts of Bihar and W. Bengal extending to seashore), dating back to the period of Dasharatha of Ramayana (c.2000 BC). The authorship of some more works like Gajapariksha, Gajadarpana and Gajachikitsa is also ascribed to sage Palakappya. Hastyayurveda is, however, his magnum opus and was respected by later writers as a classic. The study of this shastra formed an essential part of the formal training of the princes. Works with new interpretations and additions, modifications and abridgements, elaborations of certain selected topics etc. were composed continually till as late as the nineteenth century. In 1820 Raja Serfoji of the Bhosale dynasty of the Maratha rulers composed ‘Gajashastrabhashaprabandha’. This work, also preserved in Thanjavur library, is unique and immensely valuable in as much as the king included in it colored illustrations, which vividly depict the otherwise terse content of the verses. Each illustration is flanked by the relevant Sanskrit verse on the top and its translation in Marathi at the bottom. Vaishampayana’s Gajashastra, Vedavyasa’s Gajashastra-Chikitsta, etc. are some more known works on the subject. Besides these, many more texts have been preserved in the libraries on palm leaves. More definite evidence about the existence of this science is found in the Artha-sastra of Kautilya dating back to the third century BC. Kautilya appears to have been aware of some standard texts on the subject as is indicated by the words ‘nibandhena vidyuh’ (Artha. II-2) where the word ‘nibandha’ means a literary composition. (The attendants of elephants are directed to learn about the movements of elephants in the forests, checking their knowledge with the records in these works). Maintaining an army of elephants obviously required a large staff attending to various duties. Kautilya mentions about eleven of them such as adhorana (mahout), hastyadhyaksha (superintendent), hastishastravidhijnya (expert in the practical application of the science of elephantology), chikitsaka (doctor) etc., along with cooks, ration-supervisors, trainers, captivators, and guards. The duties of the elephants in war were well defined (Artha. X-4, 5) and they were trained for the purpose. Study on elephants at the academic level was continuous. Encyclopedic works preserved material on the subject and often formed the basis for such studies. Manasollasa or Abhilashitarthachintamani of Someshvardeva, a twelfth century ruler of the Chalukya dynasty is one such work. The Chalukyas according to one

opinion went to the south from Ayodhya in the north and established their kingdom there, around 550 AD. In 632 AD, The king Vishnuvardhana established an independent kingdom on the Eastern Ghats from whereon the eastern branch of the Chalukyas came into existence. Someshvardeva, the author of Manasollasa belongs to the western branch. Someshvara I of this line ruled in 1042 to 1068 at Kalyani in northern Karnataka. His first son Someshvara II ruled from 1069 to 1076 and second son Vikramaditya VI from 1076 to 1126. The latter was a prominent ruler and his achievements are recorded and eulogized by the Kashmiri poet Bilhana in his famous Sanskrit epic, Vikramankadevacharita composed before 1088. Someshvara III or Someshvardeva, the author of the present book, was his son who ruled from 1126 to 1138. He is not on the record of historians of Sanskrit literature as his work, although of immense value for the cultural and social history of India, was not of a literary character. Besides Manasollasa, Someshvardeva is also credited with the authorship of a Sanskrit champukavya (an epic composed in prose and verse) 'Vikramankabhyudayam' in which the hero is his father, Vikramaditya VI. The manuscript of this work is preserved in Jaina Pustaka Bhandar at Varanasi (Benaras). Unfortunately the book is only partially preserved. The grandson of Someshvardeva, Someshvara IV (1163–1189) is the last known ruler of the western Chalukyas. A verse in the introductory portion of Manasollasa (I-1-9) clearly states that, Someshvardeva, a well-known king of the Chalukyas, composed this valuable work containing a treasure of information. Another verse (IV-20-1493) refers to him as the son of Vikramaditya. This internal evidence confirms his authorship of the work. However, another verse in the text (II-IV-371) appears to contradict this as here, the author has made himself the standard of comparison while describing the greatness of ocean and according to Shrigondekar (1925), "No author would be guilty of so flagrant a piece of vanity." According to him, it is probable that some scholar in his court composed the work and dedicated the authorship to his patron king. Considering the encyclopedic nature of the work dealing with various topics, the probability cannot be ruled out. It was a known practice in Indian history that experts on different subjects enjoying the king's patronage composed and collected valuable information on different topics to prepare these treasures of knowledge and information. These works generally represent the knowledge base at the time, on those subjects. The authorship of such works, which were perhaps the outcome of collective effort of several academicians, was often ascribed to the kings themselves. On the basis of information contained in Manasollasa II-2-61 to 65, where the author discusses Dhruvanka (astronomical constant) for the scheme of the calendar propounded in the work, the date of composition of Manasollasa is fixed as 1131 A.D. About Manasollasa Manasollasa means 'delight' or 'radiance' of mind so called as it enlightens mind and Abhilashitarthachintamani where 'chintamani' means 'thought-gem', a fabulous gem supposed to yield its possessor all desires, indicates that the present work aspires to bestow upon its possessor the knowledge of any subject that he wants to learn about. The voluminous work consists of 10,000 or so verses composed in Anushtubh, divided into five sections called Vimshati, i.e., a group of twenty, as each section contains twenty chapters. Gaekwad's Oriental Series, Baroda published the text in three volumes in 1925, 1939, and 1961. (The present translation is based on this text). The University of Mysore too, published it in 1926. Yet, for want of complete translation, the contents of the work are not known very widely. However it is worth mentioning that three British authors [Burnell, Ticle, and Yule, 1885 as quoted by Watts (1891) under the section on rice] made a derogatory reference to the description of amusements in Manasollasa as "foolish and indecent", ignoring valuable information on natural history. This was a typical attitude of the scholars of the Mughal and British periods.

One of the topics dealt with in the text is ‘elephants’. According to the context of the respective chapters the author deals with this subject, covering the important topics of the hastishastra, at three different places, as specified hereunder: • Vimshati II, Chapter III dealing generally with the country to be ruled by the king, contains 161 verses (171–331) on characteristics of elephants, habitat, captivation methods, and training. • Vimshati II, Chapter VI (620–677) dealing with the king’s army, contains 58 verses on various diseases of elephants and their treatment. • Vimshati IV, Chapter III (405–660) dealing with sports and other entertainment contains 256 verses on elephants’ sports. Information on elephants in Manasollasa has been translated from Sanskrit to English and will be published serially in three parts. The first part is a translation of verses 171–331 in Vimshati (Section) II, Chapter III. Translation of verses Forests 171. A forest known for the breeding of elephants is considered to be the best. The king must protect such forests and also those in which elephants are known to inhabit, with the help of the forest dwellers. Identification of forests in which elephants reside 172. Forest located amidst Gangasagara1 , Himadri2 , and Prayaga3 with red sea to the west is Prachya (the eastern) forest. 173. The forest from Tripuri4 to Kosala5 is called Vedikarupa (resembling a platform). The one in Shrikshetra6 and Gaudabangala7 is the Angireya forest. 174. The forest situated over the regions of Vindhya8 , Chitrakuta9 , Kalinga10, Dravida11, spreading up to the sea is called Kalingaka. 175. Dasharnaka forest spread over Shri12, Veda13, and Malaya14 mountains, is the breeding ground of the elephants. 176. Forests in Sahyadri15 reaching up to Bhrigukaccha (western sea shore) is recognized as Aparanta and those located in Dwaravati16 and Avanti17 are the Saurashtra forests. 177. Forest in Kalanjara18, Kurukshetra19 connected to Sindhusagara20 and spread up to the Himalayas is called Panchanada. 178. Kalinga, Vedikarupa, and Dasharna are the superior kinds of forests while Angireya and Prachya are mediocre forests. 179. Aparanta, Panchanada, and Saurashtra are the inferior types of forests. These are the eight forests where elephants breed. Death penalty for elephant killers 180. The king should execute those offenders who kill elephants. If elephants die naturally or accidentally, the king should, however, take possession of their tusks. Tracing 181. Presence of an elephant herd in a forest can be ascertained from animals of the forest smeared with urine and dung of the elephants and the leaves of arushka (Semecarpus anacardium L.f.) sticking on to them. 182. It can also be inferred from the footmarks and droppings of the elephants, from the felled trees dashed against by them, from their resting places, and also from their trumpets. Ensnaring Devices 183. Equipped with all the necessary material, carrying with him foot-snares and net, and accompanied by several assistants riding on cow-elephants, carrying material required in the devices (for catching elephants), 184. –an expert in identifying the various characteristics of elephants should proceed to catch elephants of high breed, using the devices, at the king’s order, during Grishma (summer season). 185. He should, as ordered by the king and with the help of elephant-keepers and persons knowing the methods, catch elephants with any one of the three devices. 186. Vashabandha (the device of seducing), Varibandha (the device of ensnaring by obstructing the path) and Anugatabandha (The device of segregating and chasing) are the three excellent type of devices for captivating elephants. 187. The two devices called Apata and Avapata are condemned because sometimes elephants die in the process. They should therefore be avoided. Varibandha 188. Observing the grazing places of the elephants, fresh and tender grass should be spread over there. Sallaki (Boswellia serrata Roxb. ex Colebr.), plantain-stems, pieces of sugarcane sweet like nectar, 189. –tasty lotus bulbs, tender leaves of pippala (Ficus religiosa L.), green leaves of bamboo and such other matter as is cherished by elephants should also be spread there. 190. The elephant herd

cherishing tender fodder arrives there at the desired spot. Observing it arriving regularly for a few days, blocking of the path should be planned. 191. A piece of land measuring one kosa (approx. 3.6 km) in length and breadth should be encircled by trees or trenches. 192. An expert in this device should leave there a place for entrance for the elephants at the ground level. 193. A wise person having properly ascertained that the elephants have entered the place should then block the entrance (himself) concealed by big trees. 194. After that out of the elephants caught inside, those with good marks should be captured. The procedure of this kind is called Varibandha. Vashabandha 195. Seven or eight mighty and speedy tamed cow-elephants with keepers covered with leaves and carrying snares in their hands, riding on them196. –should place the snares for captivating elephants, on the trunks of the cows and then a wise person should slowly approach the elephants from the direction of the wind. 197. Manipulating the cows and seducing the elephants by them the operation of captivating the elephants should be completed. This captivation procedure called Vashabandha is wonderful. Anugatabandha 198. Having observed with perseverance through hunters that an elephant herd is sleeping [at a particular place in the forest] one should proceed for the operation accompanied by many people carrying snares and bundles of grass in their hands. 199. The elephant-catcher, accompanied by people carrying trumpets, goads, as also different kinds of musical instruments, 200. –some riding on horses, others on tamed cow-elephants, all very watchful and appointed by the king for the purpose should start on the expedition of catching elephants. 201. Intelligent servants carrying trumpets with them should be positioned at all the places on the trees nearby, where elephants come for drinking water. 202. Early morning in Nidagha (summer), the catcher should silently approach the place where the herd is resting in deep sleep, 203. –in the direction to which the wind is blowing, and hushing up the noise of men, he should order a sudden and simultaneous blowing of trumpets along with the beating of drums. 204. The herd awakened suddenly, bewildered and frightened starts running speedily in confusion. 205. At that time the experts in the operation of Varibandha should follow them on the path by which the frightened herd has left for another forest. 206. The capturers who carry snares and grass bundles should then follow the elephant that gets separated from the herd while running in fear and confusion. 207. Exhausted and thirsty, when the elephant approaches for water, hearing the noise of the trumpets there, he runs away from the place. 208. With his mouth completely parched the elephant stands still with his trunk and tail slackened and ears motionless. 209. At that time, the cow-elephants controlled and goaded by the riders should speedily approach the elephant and surround him on all sides. 210. Then the watchful men having the snares, concealed behind the bodies of the cows should bravely ensnare that elephant at his various limbs. 211. Ensnared at the armpits and throat with ropes of leather, the elephant should then be tied to the trunk of a nearby tree. 212. When an elephant is caught with this kind of a method the expert catchers call it Anugatabandha. Apatabandha 213. A rope made from the barks of coconut and anjana (Hardwickia binata Roxb.) trees should be used to prepare a snare sixty forearms (18inx60=1080in=90ft=27m) in length and one forearm (45cm) in width. 214. The half of that should be thrown over the body (of the elephant) and must be interred firmly in mud (?). The remaining half should be used to ensnare the elephant at neck and feet (?). 215. The elephant tied with this snare is severely afflicted. He may even die in rare cases. He may also survive. 216. The elephant-catchers call this procedure Apatabandha (catching suddenly). It is always condemned and is simhasamshayita (carries the risk of encountering a lion?) (Unlike other bandhas this procedure is not clear at all.) Avapatabandha 217. A pit measuring four forearms in depth, two in width and five in length (a forearm is approx. equal to 18in or 45cm) should

be prepared by a wise person. 218. It should then be carefully covered with sticks, grass, leaves, etc. When an elephant falls into it, the risk of injury or death is present here too. 219. He may break his legs, get his chest torn, lose his tusks or may in extreme cases die. 220. This device called Avapata is also therefore condemned. In this operation elephants perish and hence wise persons must not practice it. 221. After capturing the elephants the king should thoroughly investigate into their auspicious marks, imitation tendencies, origin, strength, and breed. Measurements 222. An elephant of seven aratnis (aratni = a forearm, 18in or 45cm approx.) in height, nine aratnis in length and ten aratnis when girded in width is auspicious as far as measurements are concerned. 223. One who exceeds these measurements by a single aratni is called arala (crooked) and the one that exceeds these standards by two aratnis is called atyarala (excessively crooked). Both of these being oversize are condemned. 224. An elephant that is shorter by one aratni compared to the standard measurements is madhya (mediocre) and the one shorter by two aratnis is called kanishtha (inferior). (Different scholars define the measures related to human hand etc., differently. As per the word– meaning hasta should be a length of an arm and aratni should be the length of a forearm. Lexicographer Monier Williams, however, gives identical meaning for both). 225. The elephant, smaller even than the kanishtha (inferior) is called vamana (short) and the one smaller even than vamana is kubja (hunchbacked). Both these types are the condemned type of elephants. Auspicious Marks 226. Smooth, rounded tusks with the right one slightly raised, red and smooth palate, eighteen shapely claws, (According to the modern naturalists, the Asian elephant has five toenails on each of the front and four on each of the hind feet, the total being eighteen) 227. –whitish penis, hairy tail, large ears without a hole, eyes brownish like honey, 228. –trumpets resembling the deep rumbling of a cloud, tip of the trunk preferably of a reddish color, toes, round and long and complexion of the body of an ash-gray hue, 229. –are the auspicious marks of elephants promising success (to the kings). Hence the kings should keep only such elephants as are known to possess auspicious marks. Inauspicious Marks 230. All marks, other than these, either exceeding or falling short of the standard are ugly and unnatural and are, therefore, considered inauspicious. 231. Kings should reject elephants having inauspicious marks, irritating the sight, and portending famine, misery and fear. Anuka 232. Anuka (appears to be a technical word used in the shastra) is the name given by the experts in the science of elephants, to the gait, gesture, and voice of other animals imitated by elephants. 233. Imitation of animals considered auspicious is called auspicious anuka and is preferable. Imitation of inauspicious animals is, however, condemned. (Tiger, lion, swan, etc. are stated to be auspicious while wolf, mongoose, donkey etc. are said to be inauspicious as regards the gait. Regarding voice, cloud, conch, kettledrum and animals like lion, tiger, bull, etc. are believed to be auspicious while dog, crow, pig, etc. are said to be inauspicious). Amshaka (Partial incarnation) 234. If the spots on the body of an elephant are clearly visible, complexion is whitish and beautiful, corners of the eyes are red and the tusks are strong and smooth, 235. –he is considered a partial incarnation of Brahma and equipped with such characteristic marks, deserves to be worshipped by kings as he portends success and health for them. 236. If an elephant's sides and neck are in level, has massive shoulders, if the color of his mouth resembles that of a red lotus and if he is adorned with a pair of hair cluster? (romayugma?), 237. –if his state of intoxication lasts for a long duration of time, is brave and is delighted on hearing the rumbling of a cloud, he is stated to be a partial incarnation of Prajapati and portends growth in progeny (for the king). 238. If on the body of an elephant spots or skin-folds resembling swastika, square, lotus, and circles are visible, 239. –and if his eyes resemble a red lotus, he is most likely a partial incarnation of Indra. In war, he may bring

victory and fortunes from the rival king. (Swastika is an auspicious figure that is drawn by proportionate perpendicular lines drawn at the tips of a + sign in a clockwise direction). 240. If his lips are red, tongue is of the color of a dhatri (Emblica officinalis Gaertn.) fruit and eyes and tusks are of a honey-color, 241. –the elephant being one of the best, is a partial incarnation of Kubera bringing prosperity in the form of wealth and jewels and is kept in the courtyard of the king to be worshipped. 242. Resembling the color of a dark cloud, slow in gait, difficult to be controlled by fair means, having a well-formed place where the driver sits (alternately easy to ride on), having a deep voice like the rumbling of a cloud, 243. –is an elephant who is a partial incarnation of Varuna. A large quantity of ichor flows from his temples. On the battlefield he is a destroyer of the enemy, bringing victory to his master. 244. Adorned with three skin-folds on the neck, having eyes brown like honey, possessing tusks of the color of ketaka (Pandanus odoratissimus L.f.), 245. –having a spotted white complexion is an elephant that is a partial incarnation of the Moon. This elephant makes the king victorious on the battlefield. 246. An elephant, the hair on whose body resemble the fire-flame in color, the hair of whose tail is brown, whose eyes, roof of the mouth and the opening of the trunk are of a brown color, 247. –is a partial incarnation of Agni and is indeed a fire on the battlefield. He invariably reduces the entire army of the enemy to ashes (inflicts total destruction on it). 248. An elephant, the color of whose body is dark and that of the eyes and the ears is whitish, whose nails shine like a burning wick of a lamp and whose body is solid and fleshy, 249. –is a partial incarnation of Agni and Maruta. He is short-tempered and swift. The only defect he has is that he does not care for a goad. 250. It is, however, a merit under the guise of a defect during wartime, as this elephant causes fear to the enemy's soldiers by his huge size. 251. If an elephant has a trunk that gradually tapers from the middle of the tusks up to its tip that is red in color and has long, shapely toes, 252. –if the fountain of water blown out from the trunk is fragrant, breathing is long and steady, trumpets sound like thunder and body is strong and free of folds, 253. –if the whole body is covered with soft and very short hair dark like collyrium, complexion of the entire body is uniformly of the color of a sword or a blue lotus, 254. –if the tusks are round, strong and shining like a golden ketaka (Pandanus odoratissimus L.f.), built is long and tall with a depression in the middle and temples are resounding(?) temples are –(badakumhaka is the word used which is not clear), 255. –if the lip is without hair, —(the word appears to be describing the even and attractive temples. The word sagda however, is not intelligible), the face is very beautiful and attractive to eyes, 256. –if the eyes are honey colored, eyelashes are reddish at the corners, ears are with skin-folds, strong, soft, expansive, similar to each other, without holes, 257. –and without (prominent) veins; temples sound like drums, are round, raised, and similar, resembling the breasts of Lakshmi, 258. –if the forehead is beautiful and shapely (use of the dual number for forehead is without justification), back is broad and even, neck is short and straight and shoulders are big and muscular, 259. –if the arms (front legs) are long, straight, solid and gradually taper downward, and if the feet resembling the shape of a tortoise have smooth, beautiful nails shining like the Moon, 260. –and numbering twenty or eighteen (as is characteristic of the Asian elephant as against the African one that is stated to have fourteen nails-four each on the front and three each on the hind toes), if the chest is broad, stomach is firm and breasts are very small, 261. –if the penis is not drooping and the abdomen resembles that of a hog, backbone is of the shape of a bow to which a string is attached and if the tail is long and thin, 262. –if the spots or the thin lines on the body are of the shape of a conch, wheel or mace, the elephant is a partial incarnation of Vishnu. 263. He is venerable and deserves to be revered with sacred and ceremonious bath. He succeeds in every mission

and sanctifies the nation. He is a giver of jewels and of prosperity in the form of wealth and grains. 264. An elephant, always fond of holy food, not having any skin-folds, healthy, steady and brave is a partial incarnation of god. 265. An intelligent, efficient, passion-prone, fickle and clever elephant is to be traced to the species of the Gandharvas and is only to be viewed when tied to a post. 266. He who loves to be in water, is short-tempered, extremely timid and always tempted by food is an elephant born of the spiritual essence of a Brahmin. 267. An elephant that is disciplined, brave, always full of energy, powerful, skilled in warfare, never scared on the battlefield and is composed has the characteristics of a Kshatriya. 268. An elephant that needs to be controlled with a rod, is lowly, foolish, fond of dirty food, quarrelsome and brave has in him the essence of Shudras. 269. An elephant that is treacherous, cruel, crooked in gait and does not eat when in the state of intoxication has the spiritual essence of serpents. 270. The last three types are animals of rajasa characteristics. A rajasa is one in whom pitta (bile) predominates, who is prone to the disorders related to bile and has a higher bodytemperature. 271. An elephant that always deviates from the right path, is thoughtless and conducts himself arrogantly belongs to the species of the pishachas (spirits of the dead). 272. One who wanders at will during nights, is a habitual killer of human beings, and is swift and strong is an elephant born with demonic essence. 273. These two (stated above) are the tamasa type of elephants. Animals of this type have a constitution dominated by vata (wind). An elephant of this type is very dry, sleepy and swift. 274. An elephant whose hair on the body and tail are white, whose complexion is white, eyes are white right from the birth, hails from the family of Airavata (the Indra's elephant). 275. Fit to be used in war, short-tempered, skilled in warfare, is an elephant belonging to the family of Pundarika (a quarter-elephant, presiding over the southeast direction) and has cranelike eyes, short bristles and a big head. 276. An elephant having dark complexion, well-built body, black hair, thin belly, big spots and a bow-shaped backbone hails from the family of Pushpadanta (an elephant, presiding over the North west quarter). 277. Very long and broad in physique, having fire-like complexion, golden eyes and speedy gait is an elephant belonging to the family of Vamana and is always tempted by water. 278. An intelligent elephant of huge size, having a complexion resembling that of a white water lily, thin bristles, pigeon-like eyes, and peaceful demeanor, belongs to the family of Supratika. (name of a quarter-elephant presiding over the north-eastern quarter). 279. He who possesses smooth tusks and tail, attractive trunk and raised and big buttocks originates from Anjana (name of the guardian-elephant of the South). 280. A fierce elephant with broad head, short ears and trunk, small root of the tail and loud trumpeting sound is of the family of Sarvabhauma (name of an elephant presiding over the North). 281. He who has a complexion of a white water lily, fat body, affectionate and reddish eyes , and wide and black tip of the trunk is an elephant of the family of Kumuda (name of the quarterelephant believed to be guarding the southern quarter). Training 282. Examining thus the captured elephants with great care, the king should approve only of those possessing the best characteristics rejecting those not having these. 283. After the approved elephants are tied to posts the king should commence their training by experts who eventually communicate with them with words and indications of feet-movements and goad (of the mahout) to teach them when to attack for killing and when to desist. 284. An auspicious day and place should be fixed for the purpose and making the elephant stand facing an auspicious direction (generally the East), eminent priests should recite mantras from the Samaveda. 285. The king should worship the elephant ceremoniously, with curds, durva grass (Cynodon dactylon (L.) Pers.), rice grains, flowers, sandal paste, saffron, etc. for four days. 286. Then the elephant will recollect the fact about his birth, that he originates from Samaveda, and feeling

happy with his domestication will stop brooding over the lost happiness of living in forest. 287. On an auspicious day, the hind legs of the elephants should be tied securely and firmly without causing injury to them with leather chains. 288. Seven trainers holding probes in hands should stand around the elephant; three in the front, two at the sides near the ears and two at his back. 289. Well-trained cows should be made to stand at the two sides. Then all the probe-holders should control the elephant. 290. The keeper should teach him words everyday, tirelessly and by force if necessary, to make the elephant understand what he is ordered to do with them. (The words used for the training of the elephants appear to be derived from Sanskrit, Kannada, Marathi and perhaps from some dialects). 291. For ordering the elephant to come, words like ehi! ehi! and for ordering him to move away, hede! hede! should be uttered by the trainers, expert in training elephants. 292. The word used for ordering the elephant to move to the sides is fapa and for making him sit the word, vishu should be uttered distinctly. 293. The expert trainers should say, nahnu, for ordering him to stand and the word vapdihara is uttered twice to make him withdraw the trunk. 294. For lifting his trunk up the elephant is ordered bhariha and for clinging to posts etc., hijja! hijja! 295. For lifting the forequarter of the body the words bhale! bhale! should be uttered and for bending the hind foot, the trainer should say, kih! kih! 296. The elephant-keeper should utter the words, de! de! for begging the elephant for something. For hitting with the trunk, the order is hehaiya, uttered twice. 297. For making the elephant swallow the morsel, the order is dwir! dwir! and that is to be repeated till the morsel is fully swallowed. For abandoning the same it is, churu! chuda! 298. For warding off the elephant, the expert trainers should order, 'Ma, Ma' and for striking the ground with the tusk, they should say, higa! higa! 299. In order to make the elephant strike an outward blow with the trunk, hu! hu! are the words to be used and for making him walk slowly, the order is, lecha! lecha! 300. For calling the elephant, he should be addressed with the words, iccha bhubha and for making him take an object, ghe! ghe! are the words to be uttered. 301. This is the elementary training in the language. Once the elephant masters it, he should be employed for other tasks. 302. The trainer standing in front should gently prick the elephant's trunk with the probe. Scared by that, the elephant stands with his trunk withdrawn. 303. Persons standing near the head should prick the elephant on the two sides of the chin. Scared by that, the elephant stands raising his head. 304. Persons standing at the side near the ears of the elephant should then goad him at the bottom of the ears. Frightened by them the elephant raises his ears. 305. Frightened by the pricks of the probe, if the elephant moves backward, persons standing at the back should prick him with the goad. 306. Thus the elephant learns to stay at one place and acquires the right posture (an attitude in fighting). When brought under control thus, the trainers should teach him the rest of the skills. 307. After this one of the watchful trainers, holding large leathern pouches in his hands should stand in front of the elephant while he is poised in an attacking attitude. 308. After flapping the pouches in front of the elephant the trainer should hold before him one of the pouches. The driver should instigate the elephant to strike at the pouch with words, hu! hu! 309. Instigated by the driver, the elephant, uncoiling his trunk, will strike at the pouch held before him with an outward stroke of the trunk. 310. After this, the driver, with words already taught, should make the elephant lift the trunk and strike the pouch hard with an inward stroke of his trunk. 311. Then the trainers standing at the two sides, holding similar pouches in hands should attract the elephant towards themselves. 312. The elephant will then repeatedly strike one pouch with an outward stroke of the trunk and the other with an inward stroke. 313. In the same manner, three, four, or five skilled trainers should stand before the elephant showing their pouches to him one after the other. 314. The

rider should instigate the elephant to strike one pouch with an inward stroke and another with an outward, in due order. 315. Thus the elephant will acquire skill in striking. Later he can strike men, camels, elephants, and horses as required. 316. Then the expert trainers, well versed in putting up with the fastening by the elephant's trunk should instruct him. Holding in hand, rice, raw sugar, a piece of a sugarcane or anything liked by the elephant317. –the trainer should tempt him and when the elephant stretches his trunk for it, should get himself clasped with it. 318. When clasped tightly with the trunk, he should give the morsel held in his hand. Then loosening the noose of the trunk, he should lift it up and go away. 319. When the elephant can be fully trusted in the matter of clasping (without harming the trainer), the trainer should order him to catch him with his trunk, blindfold. He should then, carefully save himself by turning and twisting his limbs and escape without harm. 320. Ultimately when pricked with the goad, and pained by the whipping, the elephant is ordered with words like higa! higa!, he will hold his trunk firmly and 321. –place his mouth on the floor and stand with his front legs bent, encircling the trunk around the body of the person. 322. Afterwards a figure of man made of leather should be thrown before the elephant's tip of the trunk, with his intention of killing aroused. (As the words varma and nirakriti used here do not make sense in the present context, the words charma and narakriti respectively, have been borrowed from the Mysore edition for the purpose of translation). 323. Then the elephant, striking the effigy hard with his trunk, piercing it with his pointed tusks and also stampeding and pounding it with the front and hind parts of his body 324. –will reduce it to powder, being already trained to kill. Thus trained, he can kill living beings like Kritanta (God of Death). 325. A leathern cube filled with a little sand should be fixed on a rod. This is known as the target. (Here too, the word charma from the Mysore edition is accepted for the purpose of translation, in place of the word karma used in the text). 326. The elephant's attention should be drawn towards the target by holding it before his trunk and shaking it for making noise. Then at the instance of the rider the elephant attacks and destroys the target with his tusks. 327. The elephant trained to strike with the tusks will attack it by various forceful strokes from upward, downward and sideways to destroy it finally. 328. The elephant should then be released from his earlier place of confinement and made to walk on the roads as the driver presses his big toes against his sides. 329. He should be made to run after a person tempting him with a morsel held in hand. The trainer should also teach him to move in circles by using thrusts on the hind parts. 330. When thus trained to distinguish between a target to be killed and the one not to be killed, the elephant can kill on the battlefield several men, horses and elephants, single-handed. 331. The king should employ only such elephants in the army, as have auspicious marks, as belong to good species and as are properly trained in all the tactics (of war). Discussion Habitat Contents of the verses 172 through 179 indicate presence of elephants almost all over the Indian subcontinent in the 12th century AD. In the late 16th century AD, according to the Ain-i-Akbari, the Mughal ruler, Akbar, drew his supplies of elephants from regions of Agra and Allahabad in Uttar Pradesh, central India and Bihar (Blochman, 1927); however by the end of 19th century AD, elephants ceased to inhabit these regions (Watts, 1890). At present the elephant habitat in India is in (i) Northwest: Dehradun, Bijnor, and the Nainital Tarai; (ii) South: Western Ghats in the states of Karnataka, Kerala, and Tamil Nadu; (iii) Central: southern Bihar, southern Bengal, and Orissa; and (iv) Eastern: northern Bengal, Assam, and other states of North-East (Daniel, 1998). Killing of elephant was never approved since the ancient times. Kautilya (c.300 BC) suggested death penalty for anyone killing an elephant and the state owned the tusks from naturally dead elephants. Someshvardeva has mentioned exactly the same rules in verse 180. Even when the population

of elephants was manifold compared to the present time, it is worth noting that the punishment for killing an elephant was far more severe than that given to the poachers today. Ensnaring elephants from the natural habitat Manasollasa describes five methods of ensnaring; viz., varibandha (verses 188–194), vashabandha (verses 195–197), anugatabandha (verses 198–212), apatabandha (verses 213– 216), and avapatabandha (verses 217-221). Modern authors (e.g. Daniel, 1998) seem to be completely unaware of the fact that the methods being followed today were developed more than 800 years ago. The varibandha method is similar to the current khedda method. The anugatabandha method is similar to mela shikar of Assam today. Vashabandha, though not followed currently was mentioned in Ain-i-Akbari and the credit for developing the method was given to Akbar by his biographer Abul Fazl (Watts, 1890). Avapatabandha is the same as the pit traps method today. Contents of the apatabandha are not clear, but it appears to be a crude method of catching elephants with specially made ropes. The last two methods were not approved by Someshvardeva, just as such methods were not approved by others (Daniel, 1998). G. P. Sanderson, a British, in his book "Thirteen Years among the Wild Beasts of India" makes an interesting statement (Shrigondekar, 1925, 1961) about capturing elephants. He states, "Some of the Maharaja's mahouts who were amongst my following had been accustomed to catch single elephants with trained females, and in pitfalls, but had they never heard of anyone attempting the capture of a whole herd. It was said that Hyder (Hyder Ali of Mysore, 1722 – 1782) had made a trial, but had failed, and recorded his opinion that no one would ever succeed and his (His?) curse will be upon anyone that attempted to do so, on a stone that is still standing near the scene of his endeavors. Consequently all the true Mussulmans who were with me regarded the enterprise as hopeless, though they judiciously kept this opinion to themselves." This passage further describes about Sanderson's own determination to make the scheme succeed but the citation ends without stating the result. The British knew the information contained in Manasollasa (Watt, 1891) on the capture of elephant herds following the varibandha method, but they apparently preferred to ignore it. Measurements Measurements of the desired size of the captured elephants were given (verses 222–225) approximately. 3.1m (10ft 6in or 7 aratnis) height, 4m (13ft 5in or 9 aratnis) length, and 4.5m (15ft or 10 aratnis) girth. It is interesting that Kautilya (300 BC) gave exactly the same measurements in Arthasastra 15 centuries before (Shamasastry, 1961). Elephants larger or smaller than the measurements given above were considered inferior, possibly for the reasons of less utility and also difficulty in training. The British were interested only in height and not other measurements (Watts 1890). In the absence of facilities to weigh elephants, the measurements indicated by Someshvardeva are significant. Good health and behavior Contents of as many as 56 verses describe the characteristics of health and behavior. In short, body color—ash-gray, smooth round tusks, smooth and red palate, 18 to 20 toes, honey colored eyes, deep trumpets, good temper, and impressive gait were considered desirable. Elephants were related to deities, castes, etc for the purpose of classification and thus we learn more than one method of classifying elephants. The Ain-i-Akbari gives the classification as recognized in Akbar's time into four classes, viz., Bhaddar—well-proportioned, erect head, broad chest, large ears, long tail, bold enduring; Mand—large, black, with ungovernable temper; Mirg—lighter colored; Mir—small head, obedient but easily frightened (Blochman, 1927). It is easy to note similar classification in Manasollasa. It is important to note the contents of verse 274. The elephant described is most likely an albino, as the later authors have mentioned (Daniel, 1998). Someshvardeva does not elaborate its qualities further. The elephant called Airavata (Indra's elephant), which had white skin, hair, and eyes, is a part of

Vedic mythology. Another verse (234) also mentions whitish skin. Shrigondekar (1925, 1961) has quoted Lyddekar (Royal Natural History, Volume II, p. 529): “Occasionally so called white elephants are met with, which are really albinos, the dark pigment being absent from a larger or smaller area of the skin; in Burma and Siam such albinos being highly valued and considered as sacred or royal elephants”. Because the British did not find a white elephant, other than the defective albinos in nature, this is no reason to disbelieve Someshvardeva. Training We have not come across any document that describes instructions for training elephants after capture in such a detail as in Manasollasa. Currently the knowledge of imparting basic training is restricted to mahouts and their communities. Though elephants are far less useful in wars today, the knowledge of training them for battles/wars is most fascinating. Elephants, however, are useful for other purposes and thus the knowledge of training methods continues to be useful. References Bharadwaj, V.S. (Ed. & Tr.) 1958. The Vikramankadeva Charit Mahakavya. Part I. Sanskrit Sahitya Research Committee, Banaras Hindu University, Varanasi, India. Blochman, H. (Tr.) 1927. The Ain-i-Akbari by Abul Fazl Allami. 2nd Edition. Vol.1. The Asiatic Society, Calcutta, India. 741 pp. (Reprint 1993). Chitrav, S.S. 1937. Bharatvarshiya Madhyayugin Charitrakosh (In Marathi). Bharatvarshiya Charitrakosh Mandal, Pune, India. Daniel, J.C. 1998. The Asian Elephant – A Natural History. Publ. Natraj Publishers, Dehra Dun, U.P, India. Ketkar, S.V. et al. 1952. Maharashtriya Jnyanakosh. Part XIII (In Marathi). Maharashtriya Jyanakosh Mandal Ltd., Nagpur, India. Krishnaswamy, M.A. 1952. Gajashastrasara (Science of Elephants) (In Marathi). Shri Sarasvati Mahal Granthalaya, Thanjavur, India. Shamasastry, R. (Ed.) 1926. Abhilashitarthachintamani of Someshwar Deva. Part I Original Library Publications, University of Mysore, Mysore, India. Shamasastry, R. 1961. Kautilya’s Arthasastra. Seventh Edition. Mysore Printing and Publishing House, Mysore, India. 482 pp. (First Edition published in 1915). Shrigondekar, G.K. 1925, 1961. Manasollasa Vol. I and III. Gaekwad’s Oriental Series No. XXVIII, Baroda, India. (The present translation is based on this text). Vachaspati, G. 1962. Arthashastra of Kautilya. Chowkhamba Vidya Bhawan, Varanasi, India. Watt, G. 1890. A Dictionary of Economic Products of India. Volume 3. Cosmo Publication, New Delhi, India (Reprinted 1972). Watt, G. 1891. A Dictionary of Economic Products of India. Volume 5. Cosmo Publications, New Delhi, India. (Reprinted 1972).

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On Fish in Manasollasa (c. 1131 AD)
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Abstract

We came across a very interesting description of fishing for royal recreation in the 12th century compendium in Sanskrit titled Abhilashitarthachintamani or Manasollasa and authored by the Western Chalukya King Someshvardeva (1126–1138 AD). The text includes description of 35 kinds of marine and fresh water fishes, each with a distinct name, the feeds provided to few fishes, and the art of angling. The text also includes a brief description of cooking fish. We have made an attempt to identify Latin names of the fishes from the names given by Someshvardeva. Fishes described in the text include sharks, a sawfish, a triggerfish, garfishes, carps, croakers, a spiny eel, catfishes, barbels, murrels, a ray fish, gobies, and snakeheads. Only half a dozen of these were nurtured for the royal game of angling. It is evident that considerable knowledge of fishes was gathered almost 900 years ago, but was ignored in subsequent centuries. We had earlier published a series of three articles containing the English translation of Sanskrit verses on elephants as described by the Western Chalukya King Someshvardeva (Sadhale and Nene, 2004a; 2004b; 2004c). Someshvardeva or Someshvara III, who ruled from Kalyani (near Bidar in northern Karnataka) between 1126 and 1138 AD, composed Manasollasa or Abhilashitarthachintamani (Shamasastry, 1926) around 1131 AD. The authors had given earlier some details about this compilation (Sadhale and Nene, 2004a; 2004b; 2004c). The Western Chalukya Empire included substantial portions of Andhra Pradesh, Karnataka, and Maharashtra by the time of the rule of Someshvardeva. It would be safe to assume that the languages spoken in his reign must have been Kannada, Marathi, and Telugu. Also knowledge of fishes from the Andhra coast on the east to the Maharashtra and Karnataka coasts on the west must have been available to Someshvardeva. In Manasollasa, Chapter 14 of Section IV deals with royal recreation through fishing and has 52 verses (verses 1381–1432). In addition, there are 13 verses (verses 1524–1536) in Section III, Chapter 13 describing preparations of fish as food. By the time we had more or less completed the work of identifying Latin names of the fishes that had been given names in Sanskrit in Manasollasa, we came across an excellent paper by Hora (1951), which gives details about Manasollasa, the Sanskrit text related to fish, its translation in English, and also the identification of fishes as well as the art of angling. Hora's paper provided us with an opportunity to confirm his work or express disagreements, especially in the identification of fish species. Translation of verses 1381–1432 (Manasollasa: Section IV, Chapter 14) Royal recreation: fishing Types of fish 1381. And now I describe below the game of fishing which is so dear to the kings. There are several species of fish and it is not possible to count them all. 1382. Still I shall describe those that are relevant to this sport. There are two main categories of fish according as they are born with plain skin or with scales. 1383. Each is further divided into two groups (depending on the size), viz., big and small. Charmaja (scaleless) are those that are born with plain skin resembling a tree bark and not having scales. 1384. Shalkaja (scaly) is stated to be those that are born with scales or shells as the outer part of their body. Again some are born in sea while others in rivers. 1385, 1386a. Here are some of the names to be remembered; sora, shringasora, chanvilocha, bala, kantakara, and sankuchaka are scaleless varieties born in sea. 1386b, 1387a. Kovasaka, khirida, pathina, and simhatundaka are fishes of huge size and are born in rivers. 1387b, 1388a. One is called patala-picchaka and has a crest of red color. Yet another is called dantapatala. Both are of medium size, born in rivers and belong to the scaleless kinds. 1388b, 1389. Gagdhara, gojjala, vidruva, and a fish called kantharaya are of a small size born in the rivers. Pandimana is a large fish belonging to the scaly kind. 1390, 1391a. Pallaka and tomara are medium-sized sea fish. Mahashila, kahlava, nadaka, vadisha, and vatagi are large river fishes of the scaly type. 1391b, 1392a.

Rohita, swarnamina, and khandalipa are powerful, though medium-sized river fishes belonging to the scaly type. 1392b, 1393a. Marila, tumbaya, and vanchi are medium-sized fishes of the scaly type. These three do not eat flour-balls and are meat-eaters. 1393b, 1394. Kaurattha swims six to seven yojanas (according to one calculation, yojana = 4 miles; krosha = 9 miles) from a big river adjacent to a mountain or from a sea into a small river, and lives in deep and large lakes. 1395a. This is the place from where they can be caught and not the sea. 1395b, 1396. Large kovakiya fish of the scaly type lives in a river in a place full of rocks and devoid of mire. The medium-sized koraka and others live deep inside a river at a place full of rocks. 1397, 1398a. Rohita and such other fishes live in a sandy place deep inside the river while pathina and others along with turtles live in very large lakes, undisturbed by running water and full of mud. 1398b, 1399. Thogyara, tumbaya, and vami live in water reaching up to naval, in the crevices of rocks either at the forepart or rear of the lakes or even in the perilous middle, bends, or islands as they please. The food 1400. Fishes should be fed ground sesame, lumps of flour, or flour of parched grains, morning and evening. 1401–1402. Kahlava, etc. should be fed on balls of the size of bilva fruit (Bengal quince; Aegle marmelos) made from the roasted flour of chickpea mixed with cooked rice. The flour along with beeswax should be mixed well in water along with ground sesame seeds mixed with cooked rice. 1403. Rohita and such other fishes should be fed on roasted flour of kusumbha (safflower) mixed with cooked rice and grit of barley meal, shaped into balls of the size of badari (Ziziphus mauritiana). 1404. Vadisha fish should be fed on crushed leaves of bilva (Bengal quince) mixed with barley meal, made into balls of the size of mango fruit. 1405. The wise should feed kovakiyas by scattering before them balls of the size of dhatri (emblic myrobalan; Emblica officinalis) fruit made out of the same mixture and on sesame and pieces of raven. 1406. Foul-smelling meat pieces should be given to pathinas and it is wise to feed the fish called simhatundaka on dhichakas (?). 1407. Marila should be given crab flesh with effort. The wise should feed turtles or roasted flesh of rats. 1408a. Small fishes should be provided with earthworms or with flesh. 1408b–1410a. At the places from where water is fetched and at the banks of ponds, arrangements should be made (by the king) to nourish fishes carefully in this manner and being informed by attendants, the king should gather together ropes and sticks to catch them. The fishing rope 1410b–1412a. The king should order good strings to be made with the sturdy strands of murva (Sanseviera roxburghiana), kanduka (betelnut tree; Areca catechu), or arka (Calotropis gigantea), or with thin lotus fibers. Among these, strings made with murva are the best. Those made with kanduka or arka are of medium quality and those made with cotton fibers are of an inferior quality. The gradation in quality is due to difference in strength. 1412b, 1413a. An expert should make good strings uniformly lengthened out like the lamp-wicks, with three strands, whether thick, medium, or thin. 1413b, 1415a. The maximum length according to the experts should be a thousand cubits (literally, two hundred measures of two extended arms). Never should a string be made less than ten cubits (literally, two measures of two extended arms) in length. Horse's hair is the lower limit for thinness. The rope must not be thinner than the stalk between the mango fruit and the twig to which it is attached. The rod 1415b–1417a. A cane (or bamboo) or a thorn-shaped branch coming up from the ground or a branch of coconut (Cocos nucifera) is recommended for making the rod. It should gradually taper resembling the tail of a chameleon. It should be made from a bamboo-half, having closely positioned knots and no holes. 1417b–1419a. The circumference at the bottom of a big rod should not exceed the measure of six angulas (where an angula is a measure of a finger's breadth equivalent to eight barley corns) while that of the small should not exceed half of that measure. Experts have

recommended angling rod made from cane that is neither too long nor too short, neither too flaccid nor too rigid. 1419b, 1420a. The one made from a branch of a coconut tree should have a (circumference ?) size of ten angulas and should have gradually tapering shape, too. It should not have too compactly positioned knots. 1420b–1422a. The angle should be curved like a hook or like a horse's hoof or like a makanda (mango) fruit or resembling a crab or of the shape of a monkey. It should be sharp and strong made with iron, broad at bottom but narrow (pointed) at the tip. 1422b, 1423. The spot on the fishhook for tying the rope should be round or like a plank, and that depresses at the center. A thick rope should not be tied on to a thick rod, or a thin string on a thin rod. 1424. The thickness or the length should be determined by (the quantity of) water and (strength and size of the) fish. The hook proportionate to the rope should be tied to the end of the rope. 1425. A peacock feather should be fixed in the middle of the rope and at the bottom of the rod, another long rope, like a tail, should be fixed. The fishing 1426, 1427. For the purpose of attracting the fish, the king should arrange to get fixed to the tip of the hook, flour-item or flesh as per the liking of the particular fish, placing the same under water, at the fishing spot. He, then, should watch the feather with a concentrated mind. 1428, 1429. When a fish touches the hook to eat the food-item fixed to it, shaking it (the feather) in the process, he should notice the change instantly and cause the strike. The fishes eating either flesh or other food-item move forward. When the fish gets strung on to the hook it struggles with full force. 1430. The fisher should, therefore, draw it out while it is weak. In the event of its gaining strength, he should let go the rod and should gradually pull the fish out taking care to see that the rope does not give way. 1431a. When the rod is released, he should otherwise drag out the fish by pulling the tail-rope. Ending 1431b, 1432. Thus, King Soma, the Lord of the Earth, the most powerful among the mortal kings, has described this sport of fishing, a sport related to fishes, for the purpose of recreation. Translation of verses 1524–1536 (Manasollasa: Section III, Chapter 13) The royal food: fish preparations 1524. In the preparation of scaled fishes, the scales must be first removed with effort. Then if the fish are big they should be cut into pieces. If small, they can be used in the same (natural) form. 1525. Heads of fishes must be cut away (like the tail-part of birds). Intestines should be removed after cutting open the belly. 1526. [The text does not make sense, particularly the first line that is printed with a question mark. The verse appears to refer to certain names of the fish-species. It reads something like this: Kahnaka, roshta (perhaps it could be misprint for proshthi), and vadisha should be burned with khavala, chachuka, and pathina after cutting off their heads.] 1527–1529. Rub oil and salt on fish so that they become slimy and the odor fades away. Afterwards wash them with water mixed with turmeric paste. Tie them in a piece of cloth and press to squeeze out all the water inside. Then mix them with the anakas (?) previously cooked thoroughly and kept ready for the purpose. After some time the cook should put down (from fire) the (earthen) dish and add seasoning. 1530, 1531. Cut fishes into pieces and wash them well. Cook along with tamarind juice. Sprinkle well with wheat flour. Fry in heated oil till brown. Add rock salt. Sprinkle powdered cardamom and pepper. 1532. Cook fishes as per test, in anaka, oil, or smokeless fire as per the method described earlier. 1533, 1534. Cut fish into pieces, measuring four angulas (breadth of four angulas) each. Mix salt and store in earthen jars. These are called kharakhandas (salted pieces) that can be preserved for a long time. The cook should roast them in fire at the time of meals. 1535, 1536. Take out the scrotums of a fish and roast them in fire. When hard, cut into pieces and fry in heated oil. Add powdered cardamom, pepper, and rock salt and season with asafetida. Discussion Types of fish In all 35 names have been given by Someshvardeva with minimal information on their habitat (marine or fresh water),

presence or absence of scales (charmaja – scaleless; shalkaja – scaly), and size (large, medium, small). Even this information is not given for each fish. As pointed out before the Western Chalukya empire included people who spoke Kannada, Marathi, and Telugu. Names of fishes in these languages, in addition to Sanskrit, were studied by us to understand the meaning of the fish names given by Someshvardeva. We have used CSIR (1962), Watt (1890), and Buchanan (1807) for identification of fishes. Bala. This is a marine, scaleless, and possibly a large fish. Bala in Sanskrit connotes "powerful" or "to injure". Hora (1951) has wrongly read bala as baala meaning "ignorant person who does not know, usually translated as fool". A particular shark, Carcharhinus macloti Day, is called pala sorah, which is a relatively small shark. We, therefore, suggest that bala stands for C. macloti. Chanvilocha. It is described also as a marine and scaleless fish, and large size is implied. Chan in Sanskrit could indicate "to injure or kill", whereas lunch means "to tear" or "to pluck". Hora (1951) traced the name to the word vilochana in Sanskrit, meaning an eye, and suggested that this could be a fish with "shining eyes". Hora further suggested that this could be a species of sawfishes, Pristis sp. We believe chanvilocha is Pristis microdon Latham, the small-toothed sawfish, found frequently in Indian seas including the Mumbai area. Fishermen are scared of this fish as it can inflict serious injuries when caught. Dantapatala. In Sanskrit, danta means teeth and patala means red. Thus it should be a fish with red teeth. Someshvardeva describes this fish as an inland, scaleless, medium-sized one. Hora (1951) has identified this fish to be Eutropiichthys vacha Ham. We find it difficult to accept Hora's identification because E. vacha is found mostly in northern India and does not have red teeth. We suggest that dantapatala is the trigger fish (Balistidae) Odonus niger Ruppel, which has red teeth and is scaleless and medium-sized. It is a marine fish, but often found in inshore waters. It is present in Indo-Pacific region (Wheeler, 1985). Though Indian workers have not described this fish, we would like to think that this fish could have been present in northern Arabian Sea through to the Red Sea during the times of Someshvardeva. Gagdhara. Dhara in Sanskrit means possessing or holding. Gag does not have any specific meaning. Hora (1951) has assumed that gag could be a phonetic variant of kag, which means a crow. Hora suggested that this could be a fish having a crow-like beak, which made Xenedoton cancila Ham. a good candidate. Xenedoton cancila is a garfish and has a long well toothed jaw. It is an inland, scaly, and small fish. This fish is called kaduru in Telugu, which is phonetically close to the word gagdhara. We agree with Hora's identification. Gojjala. This is an inland, scaly, and small fish. In Sanskrit gochara means within the range, such as hearing or visible. The word gochi means a plant with sharp leaves. Hora (1951) suggested a different interpretation; jala means water and goj means shallow. On this basis, Hora identified the fish as Ophiocephalus punctatus Bl. We find that another fish, which fits in with the features mentioned above and which is an excellent food, is Ompok bimaculatus Bl. It is a catfish. In Kannada, it is known as godla, which is phonetically close to gojjala. Kahlava. This has been mentioned as an inland, scaly, and large fish. If we try to trace the origin of kahlava in Sanskrit, ka can mean water, lhaad means to be happy. Kahlava could thus mean something from water that brings happiness. Also we believe the word catla has no origin in Latin and probably the Sanskrit name kahlava was used for renaming the fish as Catla catla Ham., which is a popular carp. Hora (1951) identified the fish as Barbus (Puntius) carnaticus (Jerdon), with which we do not agree. Kantakara. It has been described as a marine fish with no scales, but nothing has been mentioned about the size. However, because kantakara has been grouped with sharks such as sora and shringasora, we have assumed this one to be a large fish. The word kantakara in Sanskrit means one that pricks with thorns. Hora (1951) suggested that the fish could belong to a species of a genus of catfish eels, Plotosus. Species of Plotosus have

spiny fins. We believe kantakara is the name of Plotosus canius Ham., which is a common coastal and estuarine fish. Kantharaya. This one has been described to be a small, inland, and scaly fish. Kantha in Sanskrit means throat or voice and raya may mean raja (king) or speed. The whole word kantharaya could mean a royal (impressive) neck. Hora (1951) identified kantharaya as Barilius bendelisis Ham., because the latter has a dark shoulder process, which could be likened to neck. It is a "trout" common in the Western Ghats (Buchanan, 1807). We agree with Hora's identification. Kaurattha. The description given by Someshvardeva is minimal. He mentioned that kaurattha is a marine fish that migrates through rivers to large lakes where it can be caught. There is no mention about presence or absence of scales and its size. In Sanskrit, rathir means speedy, kur refers to sound, and kaula connotes living in a family. Hora (1951) suggested that kaurattha could be Hilsa ilisha Ham., but was not certain. Taking into account the meanings in Sanskrit, we suggest that kaurattha could be Pseudosciaena diacanthus Lac. as this fish migrates to shallow areas of rivers, is a croaker (ghol in Marathi), and lives in schools. Khandalipa. This is an inland, scaly, and medium-sized fish. The root of the word khandalipa can be traced in Sanskrit; khanda means broken and lipa means to cover or overspread. Hora (1951) suggested the name Mastacembelus armatus Lacel. with which we agree. It is a spiny eel. Khirida. This fish is riverine, large, and possibly scaleless. The name could not be traced to Sanskrit. Hora (1951) tentatively identified it as Pangasius pangasius Ham., a catfish. Taking a clue from a Marathi name, khirurh, we suggest khirida to be Rita gogra Sykes or Rita pavimentata Valenciannes, which is common in the rivers of the Deccan and is also a catfish. Koraka. This is an inland, medium-sized fish. No mention was made about scales. The word koraka in Sanskrit would indicate a bud. Kur, as pointed out earlier, suggests making sound. In Indian languages, there is a name karoua or korake for Pomadasys hasta Bl. (Watt, 1890), which is considered a marine fish. However, it is known to enter estuaries and is found in almost fresh water (Wheeler, 1985). We, therefore, suggest that koraka is P. hasta, which is a grunter. Hora (1951) admitted his inability to identify the fish. Kovakiya. This is an inland, scaly, and large fish. In Sanskrit kuvaak means a bad utterance, which would indicate a fish belonging to croakers, etc. Hora (1951) tentatively suggested that kovakiya could be Polynemous tetradactyles Shaw. We believe kovakiya fits in better with the fish known to be common in Mumbai area, Pseudosciaena sina C., which is a croaker. Kovasaka. This is a large fish found inland. Someshvardeva does not mention whether it is scaly or scaleless, but the name appears in the text along with sharks. The word kovasaka in Sanskrit would mean someone who inhabits filthy or stinking place. Hora (1951) suggested Mystus aor Ham. or M. seenghala Sykes. We believe kovasaka could be M. seenghala, a catfish. Mahashila. Someshvardeva mentions this to be a riverine, scaly, large fish. Mahashila in Sanskrit could mean a large stone-like (powerful) fish. This name is very similar to the famous mahaseer fish (Tor tor Ham.) of India. Hora (1951) suggested that mahashila could be South Indian Barbus (Tor) mussulah Sykes or B. (Tor) khudree Sykes. Barbus khudree is not a large fish. Hora (1951) did not consider Tor tor because it is present in northern India. We find that Day (Watt, 1890) mentions the presence of T. tor all over India. We, therefore, suggest that mahashila is T. tor, a barb. Marila. The nearest word in Sanskrit is maraal which means soft, tender, or yellowish red. It has been described as a scaly, medium-sized fish. Its name appears with riverine fishes and also Someshvardeva mentions that crabs have to be fed to this fish, obviously in a pond. Hora (1951) identified it to be Ophicephalus striatus Bloch. Because a very similar fish is called maral in Marathi, we suggest marila to be Channa (Ophicephalus) marulius Ham., which is a murrel. This fish makes excellent food. Nadaka. The word nadaka (or nalaka) in Sanskrit suggested a tubular shape or a reed-like appearance. It is

an inland, scaly, and large fish. Hora (1951) has identified this fish as Barbus curmuca Ham., a barb, which is common in waters of Western Ghats. We agree with Hora's identification. Pallaka. The word pala or palali in Sanskrit means heap of flesh. It has been described as a marine fish of medium size. Presence or absence of scales has not been specifically mentioned. However, pallaka probably is a scaly fish since it is grouped with scaly fishes, such as rohita, etc. Apte (1965) mentions pallavaka as a kind of fish. Hora (1951) considered pallaka to be Luteanus roseus Day. We disagree with Hora's identifiction and suggest that pallaka is Hilsa ilisha Ham., which is known as pala in Marathi and paliya in Kannada. Hilsa's popularity as a table fish, in spite of numerous tiny bones, is probably due to the high fat content. Hilsa belongs to the group commonly called ladyfishes. Pandimana. This fish has been described as large and scaly, and possibly found in inland waters. Pandu or panduriman in Sanskrit means pale or white and pandaa as "learned". The word pandimana in Sanskrit could mean, "liked by Brahmins". Hora (1951) identified pandimana as Lates calcarifer Bl. We believe pandimana to be the milkfish Chanos chanos Forsk. that is purely vegetarian in its food habit, which relates to "learned" persons in the ancient Indian context. This fish is called pumin in the Tulu language of Karnataka. Patalapicchaka. This is a medium-sized, scaleless fish with a red crest and is found in rivers. Picchaka in Sanskrit means tail. Hora (1951) identified it to be Clupisoma garua Ham. We do not agree with Hora because C. garua is common only in northern India. We suggest that patalapicchaka to be Mystus aor Ham., which has a dark caudal fin, and is a catfish. Pathina. This has been described as a scaleless, large fish found in rivers. Paathi in Sanskrit means someone who recites with the back moving back and forth in a sitting position. Amarkosha (Jha, 1999) mentions that pathina has one thousand molars. It is a fish that has been mentioned commonly in the ancient literature of India, and was used in certain rituals. Hora (1951) identified it to be Wallago attu Schn. and we agree with Hora's identification. Pathina is a catfish. Rohita. This has been described as scaly, medium-sized fish that inhabits rivers. Sanskrit literature frequently mentions this name. Bhavaprakasha (Chunekar and Pandey, 1986) describes rohita as a red fish that is best for human consumption. Rohita (or lohita) means red. Hora (1951) suggests rohita as Labeo fimbriatus Bl. instead of L. rohita Ham. or popularly called rohu, because the latter is of a rather large size, and not of medium size as described by Someshvardeva. However, we do not consider Hora's reason sufficiently strong. Many other authorities have consistently maintained that rohita is L. rohita. Rohita also has a name (tambada masa = red fish) in Marathi. We, therefore, maintain that rohita should be identified as L. rohita, which is a very commonly found carp. Sankuchaka. In Sanskrit, sankuchaka means one that contracts itself. Someshvardeva described this fish as a marine and scaleless fish; size was not mentioned but because it is grouped with sharks, we assume it to be large. Apte's Sanskrit-English dictionary (Apte, 1965) mentions sankocha as a skatefish. Hora (1951) did not try to identify the species. Since skates and rays are considered interchangeable groups, we tried to widen our range for identification. We find the name sankusha used in India for Dasyatis (Pastinachus) sephen Forsk. and also this fish is found commonly on the west coast of India. We suggest D. sephen is sankuchaka. Shringasora. This has been described as a marine and scaleless fish, which by implication is large in size. Sora means shark and shringa means horns. Probably because of a printing error, we find the table in Hora (1951) shows it to be a sawfish. Shringasora clearly fits in with a hammer-headed shark, Sphyrna blochii C., which is found off the west coast of India. Simhatundaka. This one has been described as a large and riverine fish, presumably scaleless. Simhatundaka in Sanskrit would indicate lion-faced. A catfish with a ferocious appearance and behavior would be the obvious candidate. Hora (1951) suggested Bagarius bagarius Ham., which is ferocious

and has under-hung mouth. It is called baghar (tiger-like) in some Indian languages. We agree with Hora's identification. Sora. Someshvardeva described this one as a marine, scaleless, and obviously a large fish. No meaning can be traced in Sanskrit. In Telugu, sora is used for any shark. Sora is the first name listed by Someshvardeva and was clubbed with other sharks. It must be an impressively large fish commonly seen in Indian seas. Hora (1951) believed that the name sora was used in plural sense for several sharks. We suggest that the name sora could have been used for the largest shark, Galeocerdo tigrinus N.H., found in both west and east coast waters. Swarnamina. This has been described as an inland, scaly, medium-sized fish, which in Sanskrit would mean a golden fish. Names such as sarana (similar to swarna, gold) in Bengal and Orissa and kannuka (kanakam in Sanskrit also means gold) in Andhra help us to identify this barb fish as Barbus sarana Ham. Hora (1951) too has identified this fish as B. sarana. Thogyara. This has been described as an inland fish. Other details are missing. It has not been possible to trace thogyara's origin in Sanskrit. Hora (1951) failed to identify this fish. Taking a clue from two local names, yerrathok-mosu in Telugu, and tharimeenu in Kannada, we tentatively suggest that this fish is Cirrhinus reba Ham., a carp found in fresh waters all over India. Tomara. This one has been described as a medium-sized marine fish and most likely, scaly. The word tomara in Sanskrit means a spear-like weapon or a forceful stroke. Hora (1951) suggested that tomara could be the garfish (needle fish) Belone annulata Day. We agree with Hora's identification. Tumbaya. This one is a scaly, medium-sized fish most likely inhabiting inland waters. Tumbaya means similar to a long gourd. According to Hora (1951), tumbuki in Telugu means puffed cheeks. Using the latter meaning Hora suggested the name Glossogobius giuris Ham., and we agree. This species belongs to the group called gobies. Vadisha. This has been described as a riverine, scaly, large fish. It was fed leaves and barley, suggesting a "vegetarian" diet. Hora (1951) tentatively identified vadisha as Notopterus chitala Ham., which is carnivorous. The word vadisha can be a phonetic variant of badisha or balisha. Taking a clue from the word balisha, which indicates strong or powerful. We suggest vadisha to be Acrossocheilus hexagonolepsis McClell., which is a barb. Vami. This is a fish that is most likely an inland fish. Someshvardeva made no mention about its size or scales. Vamah in Sanskrit means a snake, vam means vomit, and vaama means crooked. Hora (1951) was not able to identify the fish. Taking a clue from the Sanskrit meaning of vamah as snake, we suggest that vami should be the snakehead, Channa gachua Ham., which is found in fresh waters, has scales, and is a small fish. Vanchi. This has been described as a scaly, medium-sized fish, which probably inhabits rivers. In Sanskrit, vaanchhi means desired, vacha is a fish name, and vanch means to deceive. For some reason Hora (1951) suggested that vanchi could be Silonopangasius taakri Sykes, which is a medium-sized fish but is without scales. He ruled out Silonia silondia Sykes as vanchi, even though its name in Telugu is wanjou, because it is large and usually found in northern India. Another species, however, Silonia childreni Sykes is found in Godavari and Krishna rivers and is also called wanjou in Telugu. We believe vanchi should be S. childreni. This species belongs to family Schilbeidae. Vatagi. This one is an inland, scaly, and large fish. In Sanskrit vat indicates a string. Hora (1951) did not identify this fish. We believe it should be Channa leucopunctatus Sykes. Though C. leucopunctatus is a marine fish, it is known to be present inland in the Deccan and the length can be 92 cm. It is also a snakehead and has an elongated body that could be considered string-like. Vidruva. This is a riverine, scaly, and small fish. In Sanskrit vidruva may indicate something moving fast or frightened. Hora (1951) stated that this fish could belong to genera such as Chela, Rasbora, Danio, etc. We believe vidruva should be Oxygaster clupeoides Bl., a carp that is found all over India and is a fast-moving fish. A complete list of all the above fishes with their Sanskrit and

Latin names has been given in Table 1. The fish food Someshvardeva mentioned only a few fishes that must have been popular for angling. These fishes were kahlava (Catla catla), rohita (Labeo rohita), vadisha (Acrossocheilus hexagonolepsis), kovakiya (Pseudosciaena sina), pathina (Wallago attu), simhatundaka (Bagarius bagarius), and marila (Channa marulius). Of these kahlava, rohita, and vadisha were fed with vegetarian items, kovakiya with vegetarian and meat items, and pathina, simhatundaka, and marila were fed with flesh. Thus the choice of food items is in line with our knowledge today. Food items mentioned were: ground sesame, flours including roasted flours of chickpea (Cicer arietinum), cooked rice, and roasted flour of safflower mixed with cooked rice. We would like to quote here comments from Hora (1951), which are valid today. ". . . Somesvara shows a greater insight into the feeding habits of the fishes by dividing them into groups and then prescribing a suitable ground bait for each group or kind. Further Somesvara also prescribes the limit in size for the morsel of each variety of fish. He wants the ground bait to be prepared into balls but he also indicates that feeding should be done morning and evening from the steps used for taking water. The bottom is probably not steeply shelving in this place and the balls do not roll away. MacDonald (MacDonald, A.St.J. 1948. Circumventing the mahseer and other sporting fish in India and Burma. Bombay Natural History Society, Mumbai, India) suggests a mixture of mud with food but Somesvara feeds fishes on articles of food only. . . . On the whole the technique of ground baiting seems to have been better developed in Somesvara's time than at the present day." The fishing rope, rod, and bait We think Someshvardeva has given an excellent description of how to make the ropes, required for angling, from the local resources. He described materials from which ropes can be made of different strengths, lengths, and thickness. Likewise a very useful description of the rods, hooks, baits, and striking, and playing fish has been given. Fish preparations The thirteen verses (1524 –1536) basically describe the procedure to clean and cook the fish, which is not different from what is done today. Preservation by salting cleaned fishes has also been mentioned. Table 1. Names of fishes in Manasollasa and their Latin equivalents. Sanskrit name Devnagari script Latin name Bala bjlj Carcharhinus macloti Day Chanvilocha cjNivjljocj Pristis microdon Latham Dantapatala dntjpjhZlj Odonus niger Ruppel Gagdhara gjhgDjr Xenentodon cancila Ham. Gojjala gjoJJjlj Ompok bimaculatus Bl. Kahlava k*ljvj Catla catla Ham. Kantakara kqZkhr Plotosus canius Ham. Kantharaya kqVryj Barilius bendelisis Ham. Kaurattha kOrtTj Pseudosciaena diacanthus Lac. Khandalipa xjqLhiljpj Mastacembelus armatus Lacel. Khirida ixjrIL Rita gogra Sykes Koraka kork Pomadasys hasta Bl. Kovakiya kovjhklyj Pseudosciaena sina C. Kovasaka kovjhsjk Mystus seenghala Sykes Mahashila mjHhwjIlj Tor tor Ham. Marila mjirlj Channa marulius Ham. Nadaka njLk Barbus curmuca Ham. Pallaka pjlljk Hilsa ilisha Ham. Pandimana pjqLImjhnj Chanos chanos Forsk. Patalapicchaka pjhZljipjcCk Mystus aor Ham. Pathina pjhVInj Wallago attu Schn. Rohita roiHtj Labeo rohita Ham. Sankuchaka sjNkucjk Dasyatis sephen Forsk. Shringasora W\Ngjsjor Sphyrna blochii C. Simhatundaka isjNHtjuqLk Bagarius bagarius Ham. Sora sjor Galeocerdo tigrinus N.H. Swarnamina svjqj[mjInj Barbus sarana Ham. Thogyara Tjogyjr Cirrihinus reba Ham. Tomara tjomjr Belone annulata Day Tumbaya tjumbjyj Glossogobius giuris Ham. Vadisha vjiLwj Acrossocheilus hexagonolepsis McClell. Vami vjhmjI Channa gachua Ham. Vanchi vjh#cjI Silonia childreni Sykes Vatagi vjZgjI Channa leucopunctatus Sykes Vidruva ivjd`uvj Oxygaster clupeoides Bl. Conclusion It is clear that a systematic body of knowledge of both marine and inland fishes had accumulated in India by 12th century AD. Recognition of this knowledge was never recorded properly either by the Mughals or by the British. Hora (1951) tried to take this ancient knowledge to the fishery scientists of India. However, Indian scientists in general were looking only "westwards" then and apparently did not take Hora's paper seriously. It is high

time we look for documents that would reveal our wisdom on this subject. It is relevant to mention here a statement from Hora (1951). “In (my) account, I have assessed point by point Somesvara’s knowledge about the sporting fishes of India and the art of angling by comparison with the most up-to-date work on angling for Indian sporting fishes by MacDonald (reference cited earlier) recently published by the Bombay Natural History Society. In the absence of records of any observational data, which must have formed the basis of the knowledge embodied in Matsyavinoda, one must wonder as to the length of time that our ancients must have taken to accumulate so much factual and deductive knowledge. In some respects, it has not been surpassed even now.” Acknowledgment We thank Dr N G K Pillai, Central Marine Fisheries Research Institute, Kochi, India for making available a photocopy of Hora’s paper on fishes. We have downloaded some of the pictures from www.yahoo.com and www.google.com. References Apte, V.S. 1965. The Practical Sanskrit-English Dictionary. Motilal Banarsidass, New Delhi 110 007, India.1160 pp. (Reprint 1992.) Buchanan, F. 1807. A Journey from Madras through the Countries Mysore, Canara, and Malabar. Volume III. Asian Educational Services, New Delhi 110 016, India. 478 pp. (Reprint 1988.) Chunekar, K. and Pandey, G. 1986. Bhavaprakasha Nighantu of Sri Bhavamisra (In Hindi). 7th Edition. Chaukhamba Bharati Academy, Varanasi 221 001, India. 984 pp. CSIR. 1962. The Wealth of India. Raw Materials Volume IV. Supplement Fish and Fisheries. CSIR, New Delhi 110 012, India. 132 pp. Hora, S.L. 1951. Knowledge of the ancient Hindus concerning fish and fisheries of India. 3. Matsya-Vinoda or Chapter of angling in the Manasollasa by King Somesvara (1127 AD). Journal of Asiatic Society, Letters, Volume 27, No. 2, pp.145–169. Jha, Pt. Vishvanath. 1999. Amarkoshah (In Hindi). 3rd Edition. Vol. 2. Motilal Banarsidass, New Delhi 110 007, India. 582 pp. Sadhale, Nalini and Nene, Y.L. 2004a. On elephants in Manasollasa – 1. Characteristics, habitat, methods of capturing, and training. Asian Agri-History 8:5–25. Sadhale, Nalini and Nene, Y.L. 2004b. On elephants in Manasollasa – 2. Diseases and treatment. Asian AgriHistory 8:115–127. Sadhale, Nalini and Nene, Y.L. 2004c. On elephants in Manasollasa – 3. Gajavahyali: Sports with elephants in the arena. Asian Agri-History 8:189–213. Shamasastry, R. (Ed.) 1926. Abhilashtitartha-chintamani of Someshwar Deva. Part I. Original Library Publications, University of Mysore, India. Watt, G. 1890. A Dictionary of the Economic Products of India. Volume III. Cosmo Publications, New Delhi 110 006, India. 534 pp. Wheeler, A. 1985. The World Encyclopedia of Fishes. MacDonald & Co. (Publishers) Ltd., London, UK. 368 pp.

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