

PROFILE OF A NATURAL DISASTER IN ANCIENT SANSKRIT LITERATURE

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Prabhāsa-kṣetra-māhātmya, which forms a part of *Skānda Purāṇa*, contains interesting information about ancient natural disasters affecting the Kutch-Mt.Abu region of India. In this paper, selected readings of the Sanskrit text are presented with brief translations. A comparison with similar information contained in *Ṛgveda*, *Mahābhārata* and *Rāmāyaṇa* is also presented to interpret the Purāṇic text in a possible historical perspective. It is inferred that the above texts taken together, have references to brightening of a star in the Pleiades cluster and also to ground impact due to falling objects, presumably fragments of an asteroid.

Key words: Ancient natural disasters, Ground impact, North-West India, Pleiades, *Skānda Purāṇa*

INTRODUCTION

Sanskrit literature of ancient and medieval India is rich in information related to earth sciences. Books referred as *Sthala-purāṇa* or *Kṣetra-māhātmya* offer details of places that have been of historical and religious importance. It is observed that the contents of these writings cannot be taken as accurate descriptions of the region or locale considered. However, they may provide information that would be of interest to scientists, engineers and archaeologists. While searching for leads on earthquakes and disasters in ancient India, the present author came across the *Prabhāsa-khaṇḍa* (*Prabhāsa* module) of *Skānda-purāṇa*. This forms the last part of the *Purāṇa* as available in the South Indian versions. This part of the *purāṇa* actually contains four books, namely, *Prabhāsa-kṣetra-māhātmya*, *Vastrāpatha-kṣetra-māhātmya*, *Arbuda-khaṇḍa* and *Dvārakā-māhātmya*. Here, the interest is mainly in the first book, which itself is in two parts. *Prabhāsa-kṣetra-māhātmya* (abbreviated as PK)

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is implied to be concerned with the region around Prabhāsa. Gujarat region is well known to be seismically active and hence susceptible to earthquakes and tsunamis (sea waves due to earthquakes) along the coast. What is found in PK is an astounding narration of a phenomenon, which can only be interpreted as a somewhat fanciful description of a natural disaster that should have visited the Gujarat region in the remote past. An equally interesting event described is the *burning* of river Sarasvatī, which obviously is an ancient version of how the once bountiful river dried up leading to disastrous consequences. The approach in the present paper is as follows. First, PK is reviewed in detail. This is followed by brief reviews of *Mahābhārata* (MB), *Rāmāyaṇa* and *Ṛgveda*, to see how far the events of PK can be matched with the corresponding events of earlier texts. Prabhāsa in popular parlance is currently identified with the famous pilgrim center Somanātha (20.9°N 70.5° E) on the west coast of the Saurashtra region. However, the present study indicates that the original Prabhāsa was not with Somanātha, but was probably located around (23.5°N 71.5° E), nearer to the Kutch region. Further, a natural event that finds mention consistently in several texts is conjectured to be a *nova* or brightening of a star in the star cluster of *Kṛttikā* (Pleiades).

SKĀNDA-PURĀṆA

The Purāṇa literature in Sanskrit is voluminous describing what is popularly taken to be mythology linked with Hindu religious practices. Historically Purāṇas are enumerated as eighteen in number. It would appear that all the Purāṇas have evolved from a smaller nucleus to their present size. *Skānda-purāṇa* as available now is the largest of the eighteen Purāṇas with slightly more than 84,000 verses. In line with other Purāṇas, Skānda is also attributed to the authorship of Kṛṣṇa Dvaipāyana or Veda-Vyāsa, the legendary composer of *Mahābhārata*. However, even a casual reading of the text presently available point out that much material should have been added by different authors at different times. It is known that the Nepalese version of *Skānda-purāṇa* does not contain *Prabhāsa-khaṇḍa*¹. Hence, PK can be treated as an independent traditional text, in Sanskrit. Alberuni who accompanied Mahamud of Ghazni (10-11 cent. AD) in the plunder of Somanātha describes the place in his book on India². He also enumerates all the Purāṇas including *Skānda*. PK contains description of consecration of a deity at Somanātha in Purāṇic style, but does not even remotely refer to a foreign invasion. Thus, the composition of PK may be assigned to a period earlier than at least ninth century AD. The style of PK is simple but old fashioned. It is in the form of a conversation between the divine couple Śiva and Pārvatī. Several other personages are brought in to narrate a story

that is at times inconsistent, and lacking in a sense of chronology, but nevertheless amply describing a natural disaster of monumental proportions. The narration is in tune with the ancient practice of personifying natural forces and dramatizing the phenomenon. A typical example of this approach from *Mahābhārata* may be cited here. Balarāma, elder brother of Kṛṣṇa does not take part in the epic war. Instead, he goes on a pilgrimage along the course of river Sarasvatī. In his northward journey, he comes to a certain place and wonders why the west flowing river should have suddenly turned eastwards. The reason stated in the text is that when some sages on the eastern part of the land performed a sacrifice, Sarasvatī (personified as a goddess) flowed eastward to fulfill the wishes of her devoted sages, who liked to bathe in the holy river. Such a mythological modeling is a distinct possibility for a natural structure, since we see that river Śatadrū (literally one who flows in hundred ways) presently called Sutlej, exhibits a steep eastward bend near Ropar (30°N, 76°E). With this type of model in the background, a realistic reading of PK, shorn of all religious interpretations, is presented here. The Sanskrit text followed is the one brought out in Kannaḍa script by the Mysore Palace³. This edition also contains a near literal Kannaḍa translation, which is not free from errors. In the present rendering of the Purāṇa, the original Sanskrit text is followed closely. All the text specifically needed for the present discussion is reproduced here as per the above edition. A working translation that is not literal, but which highlights the implied meaning, is provided below the text.

PRABHĀSA REGION

The description of the Prabhāsa region starts in the fourth chapter of the first part of PK, in the form of a conversation between Śiva and Pārvatī.

*tasya pramāṇam vakṣyāmi sarva-sīmā-samanvitam |
 kṣetram tu trividham proktam tatte vakṣyāmyanukramāt ||
 kṣetram pītham garbhagrham prabhāsasya prakīrtate |
 yathākramam phalam tasya koṭi-kotiḡuṇam smṛtam ||
 kṣetram tu prathamam proktam tacca dvādaśa-yojanam |
 pañcayojana-mānena kṣetra-pītham prakīrtitam ||
 garbhagrhamca gavyutiḡ karṇikā sā mama priyā |
 kṣetra-sīmām pravakṣyāmi śṛṇu devi yathākramam ||
 āyāma-vyāsataścaiva ādi-madhyānta-samsthitam |
 pūrve taptodaka-svāmī paścime madhavaḡ smṛtaḡ ||
 dakṣiṇe sāgaraḡ tadvat bhadrā nadyuttare matā |*

evam sīmā-samāyuktam kṣetram dvādaśa-yojanam ||
etatprabhāsikam kṣetram sarva-pātaka-nāśanam |
tanmadhye pīṭhikā proktā pañca-yojana-vistṛtā ||
nyankumatyaparenaiva vajriṇyāḥ pūrvatastathā |
maheśvarya dakṣiṇataḥ samudrasyottarastathā ||
āyāma-vyāsataścaiva pañca-yojana-vistāram |
pīṭham etat samākhyātham atho garbha-grham śṛṇu ||
dakṣiṇottarto yāvat samudrāt kauraveśvarī |
pūrva-pāścimato yāvat gomukhācca āśvamedhikam || (4.11-4.20)

Prabhāsa is divided into three parts namely, Kṣetra (region), Pīṭha (podium or seat) and Gaṛbha-grha (sanctum sanctorum). The Kṣetra is bounded in the east by Taptodaka, in the west by Mādhava, in the north by river Bhadrā and in the south by the ocean. The extent of the Kṣetra is twelve yojanas. In the centre of the Kṣetra is the Pīṭha, five yojanās in both length and breadth. This is to the west of river Nyankumati, to the east of river Vajriṇī, to the north of the sea and to the south of river Māheśvarī. The Gaṛbha Grha is inside the Pīṭha. Its extent is from the sea in the south to Kauraveśvarī in the north; to the east is Gomukha and to the west is Āśvamedhika.

Taptodaka or Tapta-toya is identifiable as the hot water spring at (21.1° N 71.05° E) as per the maps of Geological Survey of India⁴. Yojana is a length measure approximately equal to six miles or 9.6 kilometers⁵. The text proceeds in a fashion, which combines geographical information with several religious symbols supposedly well known to the readers or listeners of the Purāṇa. A close link of the place with one or more fires of marine origin is conspicuous from the beginning.

yosau kālāgni-rudratu procyate veda-vādibhiḥ |
soyam bhairava-nāmnā tu prabhāse sam-vyavasthitāḥ ||
agninā yatra taptam tu divyābdhānām caturyugam |
megha-vāhana-kālpe tu tatra liṅgam babhūva ha ||
agni-miḍheti vedokta-prabhāvaḥ sura-sundarī |
kālāgni-rudra-nāmā ca devaiḥ sarvaiḥ udāhṛtam ||
agni-īśāneti deveśi nāma-tritayam ucyate | (4.68, 4.71-73)

One, who is called Kālāgni-rudra, by those following the Vedas, is in Prabhāsa by the name Bhairava. When Agni (Fire) burnt continuously for a length of

four yugas in the Indra Kalpa a liṅga came into existence there. This liṅga has three names, Agniṃḍha, Kālāgni-rudra and Agni-iśāna.

The word *liṅga* means *symbol* that can signify gender. Thus, in popular parlance, it refers to phallus of Śiva. Reference to Veda, is perhaps for the famous *Rudra Sūkta* of Yajurveda. In the seventh chapter, the location of *Prabhāsa* is again repeated with some further information on the position of the *liṅga*. The location of the *liṅga* is surmised to be at the center of the *garbha-grha* explained previously.

vāruṇim diśam āśritya sāgarasya ca sannidhau |
kṛtasmarasya parato dhanvantara-śata-traye ||
liṅgam mahā-prabhāvantu svayam-bhūtam vyavasthitam |
tatra sannihito devaḥ śaṅkaraḥ parameśvaraḥ ||
etasmin antare devi someśasya samīpataḥ |
caturdaśe vibhāge tu dhanuṣām ca śata-dvayam ||
samantan-maṇḍalākāram karṇikā sa mama priyā | (7.65-7.68)

Towards the west, near the sea at a distance of 300 bows (1 bow~ 2 meters) due west of Kṛtasmarā mount, the great self-created liṅga exists. There stays Lord Śiva. In between, near to Somanātha (liṅga) there is a 200-bow diameter circular opening (karnika) with fourteen divisions.

The fiery origin of the *liṅga* is indicated by the nomenclature *tejoliṅga* (ch. 7.58) and later in chapter eight in the statements,

tacca liṅgam purā kalpe sapta-pātāla bhedhakam |
kathitam koṭi-sūryasya pralayānala-sannibham ||
tena kālāgni-rudreti proktam someśvaraḥ purā | (8.28-8.29)

That Someśvara liṅga in the previous epochs had broken out from the depth of the earth, it was bright like one crore suns and was burning like the fire during the dissolution of the world (Pralaya). Hence, Someśvara is referred to as Kālāgni-rudra.

In the eleventh chapter, there is a simple but clear description of the boundaries of the Indian subcontinent. Some of these statements are similar to what appears in books such as the *Bṛhat-Saṃhitā* of Varāhamihira (5-6 cent AD)⁶.

*dakṣiṇāparato yasya purveṇa ca mahodadhiḥ |
 himavān uttareṇāsya karmukasya yathā guṇaḥ ||
 tadetat bhāratam varṣam sarva-bijam varānane |
 eṣa kūrmo maya khyāto bhārate bhagavāniha |
 tasya naiṛta pāde tu saurāṣṭra iti viśrutaḥ |
 tasya yo navamo bhāgaḥ sāgarsya ca sannidhau |
 prabhāsa iti vikhyāto mama devi priyaḥ sadā ||* (11. 13-14, 28, 37-38)

The landmass enclosed by the great sea in the south, west and east and by the Himālayās in the shape of a bowstring in the north, is Bhārata-varsa. Bhārata is equated with a tortoise (Viṣṇu as Kūrma). In the southwest direction of this landmass is Saurāṣṭra. The ninth part of this, near the ocean is called Prabhāsa.

Here, the text once again gives the dimensions of the Prabhāsa region as previously. This chapter is very long but surprisingly, neither Somanatha nor the hot springs are mentioned. Next, the text develops a connection between Sun and Prabhāsa,

*viśvakarmā tu anujnātaḥ śākadvīpe vivasvatā |
 bhūmim aropya tattejaḥ satanāya upacakrame ||
 bhramatā khalu deveṣi sacandra-graha-tāraḥ |
 adhogatim mahābhāge babhuvākṣiptamākulam ||
 vikṣipta-salilāḥ sarve babhuvuśca tathā nadāḥ |
 vyabhidyanta tathā sailāḥ śirṇa-sānu-nibandhanāḥ ||* (11.141, 143, 145)

Viśvakarmā placed the heat of Sun on earth, in a place called śāka-dvīpa and filed him. The spinning of Sun, displaced the moon and the planets. The oceans got disturbed and the mountains broke down.

This is perhaps a speculation on the part of PK about creation, in tune with what a Purāṇa is supposed to contain. The interesting point is that the text says a part of Sun fell at Prabhāsa. The text also identifies that out of the first fifteen parts of Sun, the discus of Viṣṇu, the trident of Śiva, the spear of Skānda, the weapons of all the gods and demons were formed. (11.195-205). This is an allusion to the celestial origin of some of the later religious symbols. The text is not clear on whether Śāka-dvīpa is same as Prabhāsa. However, a definite connection between the two places is mentioned in Chapter 13.

*śāka-dvīpe mahādevi bhramistasya tadā raveḥ |
varṣāṅām tu śatam sāgaram takṣyamāṇe vibhāvasau ||
yadādya-bhāgajam tejaḥ tatprabhāse apatat priye |
patitam tatra tattejaḥ sthālākaram vyajāyatā ||* (13.5-6)

While at Śāka-dvīpa, Viśvakarmā worked on Sun, for hundred years reducing his heat. The first part, which fell at Prabhāsa took the shape of the land.

There is a speculation on when this incident could have taken place. There is also a description of how large an area of the region was covered with dust, produced by the event. A sample of such description is

*yadā svārociṣo devi dvitiyo abhut manuḥ purā |
tasmin kāle avatirno 'sau devastatra divākaraḥ ||
etasminnantare devi sauram tejaḥ prasarpitam |
tena pāvityam ānītam kṣetram dvādasa-yojanam ||
sūrya-dakṣiṇa-nairṭye pātāla-vivaram priye |
mandehā rākṣasā yatra tathā śālakataṅkatāḥ ||
sūryasya tejasā dagdhāḥ pātālam agaman purā |
kālau tad dvārameva asti na pātāla-gatiḥ priye ||* (13.11, 17, 32, 33)

Sun descended at the time of Svārociṣa Manu (~1665 million years B.P). The dust created by Sun's energy spread for five yojanas, from Maheśvari River in the north. In the east-west direction, it spread for five yojanas, from Nyankumathi River to Kṛtasmarā mount. The light spread much farther. The region acquired sanctity for twelve yojanas by this light. Near that place of Sun, in the southwest direction, there is a deep opening in the ground. This is where in ancient times the demons Mandehā and Śālakatankatā, went underground being burnt by Sun. Now in kaliyuga, this opening can only be seen, but it is not possible to go underground there.

The necessity of invoking such long periods of several million years is not explained. Both the above episodes are perhaps reminiscences of a meteorite impact. The underground opening is described in Chapter 16 further in twenty-seven verses.

*pātāla-vivarasyāpi māhātmyam śṛṇu sāmpratam |
pūrva-ṛṣṭam mahādevi brahmaṇā viśvakarmanā ||
tamobhāve samutpanne jātāḥ tatraiva rākṣasāḥ |
sūryasya dveṣiṇaḥ sarve hi asaṅkhyātāḥ mahābalāḥ ||*

te tu dṛṣṭvā mahātmānam samudyantam divākaram |
te dhūmra-pramukhāḥ sarve jahasuḥ sūryamanjasā ||
nipetuḥ ambara-bhraṣṭāḥ kṣiṇa-puṇyā iva grahāḥ |
rākṣasaiḥ veṣṭito dhūmraḥ nipatan śuśubhe ambarāt ||
ardha-pakvam yathā tāla-phalam kapibhirāvṛtam |
yadrcchayā nipetuste yantra-muktā yathopalāḥ ||
tato vāyu-vaśāt bhraṣṭāḥ bhivā bhūmim rasātaḥ |
jagmuḥ te kṣetramasādya prabhāsam varavarṇinī ||(16.1-3,16.10-12)

When Viśvakarmā produced dark matter, several demons that were enemies of Sun came into existence. Dhūmra (smoky) and other such demons laughed at the rising Sun and made fun of him. Then Sun looked at them angrily and the demons tumbled down to earth like planets devoid of their merits. Dhūmra, encircled by other demons shone, while falling from the sky, like a half-ripe palm fruit surrounded by monkeys. They all fell down like stones released by chance from a machine and carried by wind reached Prabhāsa and broke the earth to go underground.

yatra cārkasthalao devaḥ sarvasiddhi-pradāyakaḥ |
tatsānnidhya-stiṭham devi pātāla-vivaram mahat ||
anyāni kotīśaḥ santi tāni luptāni bhāmini |
kṛtasmarāt samarābhya yāvadarka-sthalo raviḥ ||
iti sankṣepataḥ proktam arkasthala-mahodayam |
rākṣasānām ca sampātāt abhūcca vivaram yathā ||
evam tu prakatam tatra dṛśyate adyāpi bhāmini |
śrīmukham nāma tat dvāram rakṣyate mātṛbhiḥ priye ||
 (16.13-14; 21-22)

The big underground opening is near Arkasthala. From Kṛtasmarā upto Arkasthala there were innumerable other holes in the ground. Now those are all closed. The birth of Arkasthala (Sun-land) has been briefly explained along with the underground openings caused due to the impact (sampātāt) of the demons. Only one opening by name Śrīmukha, protected by Sunandā is visible now, whereas others have vanished.

The above text is clearly a description of one or more heavenly objects hitting the then seacoast or the ground near Prabhāsa. The comparison given, the name of the demon as smoky (Dhūmra) and the explanation that the demons fell from the sky like stones indicates this to be a wide spread phenomenon. The story of the descent of Sun, in the 13th chapter and the above ground impact due to stones may be

memories of ancient disasters, which were carried by different groups of people in different ways, by personifying the natural forces and their effects. The text next explains how the place got another name Somanātha (Moon's master). This story appears to be purely imaginary lacking in physical significance and hence not presented here. However, Alberuni reports a justification, which is reasonable⁷. From the 29th chapter onwards there are instructions to visitors on what they have to see and do at Prabhāsa. Further PK presents a story linked with the receding of the sea and the resulting calamity. Briefly the text is,

varaḥ śāpaśca tasyāyam purā datto yathā dvijaiḥ |
evam śaptaḥ samudraḥ taiḥ brāhmaṇaiḥ varavarṇini |
tato varṣa-sahasramtu hyasprśyaḥ sambabhūva ha || (29.25, 58)

This sea has been both cursed and blessed by Brāhmaṇas. Being cursed by them, this sea remained untouchable for thousand years.

The reason for the curse is described in a lengthy story (Ch.29.32-58) that once the Brahmanas went to the sea, desperately seeking food. They were given sumptuous food in the form of rice but fish-meat was concealed inside. The Brāhmaṇas felt cheated, since by eating prohibited food they lost their powers of going with *Devās* and *Gāndharvas* in the sky. The story goes further that, at the intercession of *devas* and *Brahmā*, the local Brāhmaṇas agreed to retract the curse and make the sea fit for bathing. This story obviously refers to a famine or failure of crops forcing people to resort to seafood on large scale. There is also a reference to recession of the sea for a long time followed by a rise in the sea level. This phenomenon was connected with *vāḍavāgni* as it is said,

tasya madhye mahāsāram vāḍavam yatra vai mukham |
śrī-someśāt dakṣiṇato dhanvantara śatāvadhi |
uttarāt mānasāt pūrvam yāvadeva kṛtasmaram || (29.96,97)

In the centre of this (Agni-tīrtha) situated to the south of Someśvara, to the east of Mānasā (lake) and upto Kṛtasmarā mount is the 100 bow-wide face of Vāḍava.

The sequence of events starting with a meteoritic impact, receding of the sea, the learned among the community, under compulsion to eat fish, and the marine fire that is equated with *kālāgni-rudra* (angry fire of Time) of the *vedas* indicate a wide spread calamity. There is no description of what may be considered a volcanic eruption. However, the text refers to (*Vāḍavāgni*) a fire in the form of a horse without thighs, linked with river *Sarasvatī*. This starts in chapter 32, with the story of sage *Dadhīci*

living on the banks of Candrabhāga (presently Chenab) river. The sage sacrifices himself so that Indra and other gods could get their armaments made from his bones. Pippalāda, son of Dadhīci learns about this from his mother and does penance so that he could take revenge on the gods for whose sake his father had to die. From his left thigh comes Aurva or Vāḍavāgni, that is, a fire with the face of a horse without thighs. Vāḍava is ordered by Pippalāda to eat away the gods one by one. However, Viṣṇu intervenes on behalf of the gods to convince Vāḍava that he should first consume water, since water was the first to be created among the gods. Vāḍava agrees to this but says he will go to the ocean only by holding the hand of a maiden. Viṣṇu asks Gaṅgā and other rivers to carry the fire to the ocean. They express their inability since the fire is too terrible to be carried by them. Finally, river Sarasvatī agrees to carry the fire with the permission of her father Brahmā (Creator) after a lengthy conversation between them. The gist of their discussion is, Sarasvatī is advised to stay underground, and is asked to turn east and show up whenever she feels tired. All such places would be declared holy and fit to be recognized as *tīrthas*. This chapter also describes briefly the course of the river.

*himavantam girim prāpya plaksāttatra vinirgatā |
 avatīrṇā dharā-prṣṭhe matsya-kacchapa-saṅkulā ||
 puṇya-toyāvahā devi stūyamāna dvijātibhiḥ |
 vāḍavam vahnimādāya hayavegena nihsṛta ||
 bhītvā vegāt dharā-prṣṭham praviṣṭā 'tha mahitalam |
 yadā yadā' bhavacchrāntā dahyate vāḍavā'gninā ||
 tadā tadā martya-loke yāti pratyakṣatām nadī |
 tatastu jāyate prācī santaptā vāḍavena tu |
 tato vai yāni tīrthāni kīrtitāni purātanaiḥ ||
 khādiramodaṃ āsādyā tatra sāvīkṣya sāgaram |
 gantum pravṛttā tam vahnimādāya surasundarī ||
 niruḍha-bhāramātmānam devādeśāt vicintya sāvī |
 prahrṣṭā sumanastasmāt pravṛttā dakṣiṇamukhī || (33.41,43-45,47-48)*

Having reached Himālaya she started from Plakṣa and descended to the earth with fish and tortoise. Even as the Brāhmaṇas were praising her, she carried Vāḍavāgni, and flowed with the speed of a horse. Whenever she got tired due to the burning, she broke open the ground and came up. At such places, she turned eastwards and as told by the ancients those places became Tīrthas (holy waters or lakes). When she arrived at Khādirāmōda (grove of khādira or

Acacia catechu trees) and saw the sea, she felt happy that she is carrying a burden as ordered by God. Being contented, she started flowing southwards.

Khādirāmoda, perhaps refers to the region around the present day Khādir island (23.87°N,70.25°E) in Kutch. At this stage, PK describes that Sarasvatī divided into five streams called, Hariṇī, Vajriṇī, Nyanku, Kapilā and Sarasvatī, which have been associated with Prabhāsa in an earlier chapter. Further, Sarasvatī approaches a mountain by name Kṛtasmara. Here follows a poetic description of the mountain with its flora and fauna. The hill is personified as the king of mountains who first woos; but after being rejected, forces Sarasvatī to marry him. To this Sarasvatī responds,

*yadi mām tvam pariṇaye rudantīm ekakām tathā |
grhāna vāḍavam haste yāvat snānam karomyaham ||
evamukte sa jagrāha tam nagendropavarjitam |
kṛtasmaraḥ tatsamsparśāt kṣaṇāt bhasmatvam āgataḥ ||
tataḥ prabhṛti te tasya pāsaṇā mṛdutām gatāḥ |
grha-deva-kulārthāya grhyante śilpibih saha ||
dagdhvā kṛtasmaram devi punarādāya vāḍavam |
samudrasya samipe sā sthitā hṛṣṭa-tanūruhā ||* (33.88-91)

'If you like to marry me, one who is weeping and alone, then hold this fire in your hand till I bathe'. As soon as Kṛtasmara held the fire, he was reduced to ashes. From then onwards, the stones of that mount became soft and artisans started using them for building temples and houses. After burning Kṛtasmara hill, Sarasvatī carried Vāḍava further to the sea.

The description of the spout through which the river supposedly vanished eventually is also figuratively described. Vāḍava being pleased with Sarasvatī, asks her to seek a boon from him. She in turn thinks of Viṣṇu for a suggestion.

*tatastena hṛdisthena proktā devī sarasvatī |
prārthanīyo varo bhadre sucī-vaktratvamādarāt ||
tatastvabhīhito devyā yadi me tvam varapradah |
tataḥ sūcī-mukho bhūtvā tvam pibāpo mahābala ||
evamuktena tattena sūcī-vedhasamam kṛtam |
ghaṭikā-pūraṇam yadvat pāpau tad-vadanam jalam ||* (33.99-101)

Then, she was advised by Viṣṇu, staying in her heart, “Dear Sarasvatī, ask him to become needle faced”. Accordingly, as per her request, Vāḍava acquired a funnel like neck as in an hour-clock, to drink water.

The next chapter of PK is called *Sarasvathy-avatāra-mahimā-varṇanam*, which, means description of the purpose of the *avatāra* (descent) of *Sarasvatī*. The *vāḍavāgni* episode with some more details is again repeated.

tam samarpya tataḥ tasmin nadī bhūtvā sarasvatī |
praviṣṭā sāgaram devi nāradeśvara-mārgataḥ ||
tato 'badhim sampraviṣṭā sā pañca-srotā mahānadī |
svarūpeṇaiva sā puṇyā puṇaḥ puṇyatama 'bhavat ||
prabhāsa-kṣetra-samparkāt samudrasyaca sangamāt |
sāgaro 'pi samāsāḍya sarasvatyāstu vāḍavam |
nirdhano dhanamiva prāpya 'cintayat kva kṣipāmyaham ||
sa tenaiva karasthena dīpyamānena sāgaraḥ |
vahninā śikharasthena bhāti merurivā 'paraḥ ||
tasyocchvasānilodbhūtam tattoyam sāgarādbahiḥ |
nirmayādeva yuvatīḥ itaścetaśca dhāvati ||
atha kāle gate devi śuṣyatyambu śanaiḥ śanaiḥ | (34.15-19, 26-27)

Then having offered (vāḍavāgni) to the sea, Sarasvatī as a river entered the ocean through Naradeśvara. The river, dividing itself into five, flowed into the ocean. She who was already holy became the holiest, due to her contact with Prabhāsa and the ocean. The ocean having got vāḍavāgni from Sarasvatī, like a pauper getting money, did not know where to keep him. With fire in his hand, the ocean lit up like another Mt. Meru with fire at its peak. Due to the gases emanating from the sea (ucchvāsa-anila-udbhūtam), the waters overflowed and traveled in all directions, like a maiden without discipline. After some time, the waters slowly started drying up.

In this chapter it is mentioned, that after the fire started burning, initially the sea exceeded in its boundaries but later the coast started receding. The text goes on to say that, at the request of the sea, the waters were restored, after some time. This is similar to the statement in a previous place, that the sea at Prabhāsa once receded and once exceeded its boundary. In the next chapter, again the path taken by Sarasvatī in her travel is delineated in a poetic language.

evamuktā tadā tena brahmaṇā ca sarasvatī |
 himavantam girim prāpya pippālādaśramāttadā ||
 udbhūtā sā tadā devi adhastād vrkṣa-mūlataḥ |
 tasmāt sthānāt tato devi praticyābhimukham yayau |
 antardhānena sā prāptā kedāram hima-madhyagam ||
 tat-samplavya gireḥ śṛṅgam kedārasya puraḥ sthitā |
 tenāgninā karasthena dahyamānā sarasvatī ||
 bhūmim vidārya tasyā 'dhaḥ praviṣṭā gaja-gāminī |
 tadantardhāna-mārgeṇa pravṛttā paścimāmukhī ||
 pāpa-bhūmim atikramyā bhūmim bhitvā vinirgatā |
 tatra kūpaḥ samabhavannāmnā gāndharva-sanjñitāḥ ||
 tasmāt kūpāt punardrśyā sā babhuva mahānadi |
 matiḥ smṛtiḥ tathā prajñā medhā buddhi girā dharā ||
 upāsikāḥ sarasvatyāḥ ṣaḍetāḥ prasthitāstadā |
 punaḥ pravṛttā sā tasmāt udbhedāt paścimāmukhī ||
 bhūtiśvaram samāyāta siddho yatra mahāmuniḥ |
 bhūtiśvare samīpastham tatra prāptā manoramā ||
 tasya dakṣiṇa-diksamsthām rudra-koṭyupalakṣitām |
 śrikanṭhadeśam vikhyātam gatā sarvaṣadhiyutam ||
 tasmāt puṇyatamāt deśāt śrikanṭhatmā manasvinī |
 samprāptā vahninā sārddham kurukṣetram sarasvatī ||
 punastasmāt kurukṣetrāt virāṭanagarasya sā |
 samudbhūta samīpasthā antardhānāt manoramā ||
 gopāyano giriryatra tatra sā punarudgatā ||
 gopāyitā keśavena yatra te pāṇḍu-nandanāḥ |
 kurvantaḥ svani karmāṇi na kaiścidupalakṣitāḥ ||
 tatra kuṇḍe sthitā devi mahā-pātaka-nāsinī |
 punargopāyanāt devi kṣetram prāpta 'ti-śobhanam ||
 kharjūrī-vanam āpannā nanda-nāmniti tatra sā |
 sarasvatī punastasmāt vanāt kharjūra-sanjñitāt ||
 meru-pādam samāsādyā mārkaṇḍāśramam āgatā |
 yatra mārkaṇḍakam tīrtham merupāde samāśritam ||
 sarasvatī punastasmāt arbudāraṇyam āśritā |
 gatā vaṭa-vanam ramyam mārkaṇḍeyāśramāt śubhāt ||
 tapastaptam purā yatra vaśiṣṭhena samāśritāt |

tasmāt vaṭa-vanāt puṇyāt udumbara-vanam gatā ||
meru-pāde ca tatraiva taṇḍiḥ yatra atapat tapaḥ |
udumbara-vanāt tasmāt punardevī sarasvatī ||
antardhānena śikharam anyat prāptā mahānadī ||
meru-pādam tu sumahat-sura-siddha-niṣevitam |
bhinnānjana-cayākāram golāṅgulam iti smṛtam ||
sthānam manoramam tasmāt udgatā sā sumadhyamā |
vaṃśa-stambhāt suvipulā pravṛttā dakṣiṇā-mukhī ||
tatrodgama-vaṭaḥ tasyāḥ tatsamākhyo vyavasthitah |
tataḥ prabhṛti sā devī suprabhām prakāṭā sthitā ||
antardhānam parityajya prāṇinām anukampayā |
tasyāstaṇḍeṣu ranyeṣu santi tīrthāni koṭiśaḥ ||
teṣu tīrtheṣu sarveṣu dharma-hetū sarasvatī |
rudrā 'vatāra-mārge 'min pravaram prathamam smṛtam ||
tarattaraṅga-nāmādhyam kākatīrtham mahā-prabham |
tatra tīrtham punstvanyat tīrtham dhāreśvaram smṛtam ||
dhāresvarāt punaḥscā 'nyat gangodbhedamiti smṛtam |
sārasvatam tathā gāṅgam yatraikam samsthitam jalam || (35.21-47)

Sarasvatī sprang up near the roots of a tree, in the hermitage of Pippalāda, in Himālayas. From there, she started towards west and went underground. She reached the Kedāra Mountain in Himālayās, wetted its peaks and stayed in front. When the fire burnt her, she broke the earth and went westwards underground. She crossed the sinful land and broke the earth to come out from a well (kūpaḥ) called, Gāndharva. Then she became a big river with six tributaries Matī, Smṛti, Prajñā, Medhā, Buddhi and Giridharā. From this place, she again flowed west. Then, having reached Bhūtīśvara, the place of sage Siddha, she went nearby south to Śrīkaṇṭhadeśa, which is famous for its medicinal plants and minerals. From Śrīkaṇṭhadeśa, she reached Kurukṣetra along with Aurva. From here, she traveled and went underground near Virātanagarī and came up at Gopāyana hills. From Gopāyana Lake, she reached Khārjurīvana (forest of date-palms). From here, she was known by the name Nandā. She reached the hermitage of Mārkaṇḍeya, where Mārkaṇḍeya Lake is located on the slopes of Meru hills. From the hermitage of Mārkaṇḍeya she came to Arbudāraṇya where previously Vaśiṣṭha had done penance. From the banyan tree at this place, she went to the udumbura (country fig; Ficus glomerata) forest of sage Taṇḍi in the same Meru hills. From the udumbara

forest, she went underneath to reach a dark peak called Golāṅgūla at the foot of the hills. From this place, she started flowing, with a size thicker than a bamboo stick, southwards. This place became famous as Udgamavaṭa. From here, she remained above ground and flowed clearly, with several holy places on her banks. Among the various tīrthas (holy waters) the foremost is Kākathīrtha also known as Tarattaraṅga. Then, there is another place called Dhāreśvara. After Dhareśvara is the tīrtha called Gaṅgodbhava. Here the waters of Gaṅgā and Sarasvatī mingle together. After this is Puṇḍarīka tīrtha.

Some of the places mentioned above can be identified. Śrīkaṇṭhadeśa⁸ is the region around Sthāṇeśvar (29°58'N, 76°48'E). Arbudāranya is the region around, Mt.Abu (24.75°N, 72.25°E). Kharjurīvana, Tarattaraṅga and Dhāreśvar can be identified as Khājūria (24.5°N, 72.25°E); Taraṅga hills (23.5°N, 72.6°E) and Dharewada (24°N, 72.4°E) respectively. In this fashion several more places through which Sarasvatī is supposed to have flown, are named. Places where the flow could have changed its direction are indicated. For example at Siddheśvara, (Sidhapur 23.9°N, 72.3°E), Sarasvatī flowing westward to reach the western ocean, turned eastwards. At this place is Brahma-thīrtha, also called Siddhavata. Similarly, Sarasvatī flowed eastwards at Prācīneśvar. There are considerable inconsistencies in the narration and there are differences between this chapter and what was stated in the previous chapters. For example, it was said previously that Sarasvatī divided into five branches near Prabhāsa. However, here this happens at a place called Gaṅgāsangama after Vālahilya thīrtha. Places such as Vaṭeśvar, Maṇḍīśvar and Dvārāvati, which may be identifiable (?), find mention. A few more verses are quoted here.

*dakṣiṇām diśamāsthāya punaḥ paścānmukhī tadā |
sarasvatī mahādevī vāḍavā 'nala-dhāriṇī ||
taduttare taṭe tīrtham ekadvāramiti smṛtam |
tasmāt tīrthāt punaḥścānyat tīrtham yatra guheśvaraḥ ||
guheśvarāt nātidūre vaṭeśvaramiti smṛtam |
divyam sarasvatītīre vyāsenārādhitam purā ||
āmardaki nadī yatra sarasvatyā sahaikatām |
saṅgameśvara-nāmeti tatra liṅgam pratiṣṭhitam ||
muṇḍīśvareti ca tathā prasiddhim agamaṭkṣitau |
muṇḍīśvara-samīpastham sarasvatyām mahodayam ||
nāmnā yat prāṅgmukham tīrtham sarasvatyāḥ tate sthitam |
māṇḍavyeśvara-nāmnā vai yatreśaḥ sampratiṣṭhitāḥ ||*

pīlukarṇikā-sanjñam tu tīrthamanyat punaḥstataḥ |
sarasvatī-tīragatam ṛṣiṇā sevitam mahat ||
tasmādanyat sarasvatyām tīrtham dvāravati smṛtam |
tīrthānām pravaram devī yatra sannihito hariḥ ||
tatastasya samīpastham tīrtham govatsa sanjñitam |
govatsāt naiṛte-bhāge dṛṣyate loha-yaṣṭikā ||
tatastasmāt mahātīrthāt bālakṛīḍanakī yathā |
anulomya vilomyena dakṣiṇena uttarenaca ||
rullam prāpya punardevī samudbhūtā manoramā |
rullam nama puram yatra sṛṣṭam devena śambhunā || (35.67-81)

Sarasvatī the carrier of vāḍavāgni, went south and then turned west. On her northern bank is Ekadvāra tīrtha. Guheśvara and Vaṭeśvara, worshipped by sage Vyāsa, come after this. This is the place where a river by name Āmardakī merged with Sarasvatī. This place is famous on earth as Muṇḍīśvara. Near this place is the east facing Mahodaya tīrtha. Similarly on the banks of Sarasvatī is Pīlukarṇikā where there was a settlement of sages. After this place, is Dvāravati where Viṣṇu is present. Near this is Govatsa. To the southwest of this place a metal column is visible. From here onwards Sarasvatī along with her tributaries started flowing back and forth, South and North, as she liked, like a playful child. Then Sarasvatī reached the city of Rulla, founded by Śambhu (Śiva) himself.

Further to the above, the progress of the river as per the text is confusing, but eventually she divides herself into five branches, burns Kṛtasmara mount and deposits the fire Aurva in the salt sea (verse 35.94). The first part of PK consists of 125 chapters. After the 35th chapter referred above the text drifts into the details of a large number of holy places in and around *Prabhāsa*.

SECOND PART

The second part contains the remaining 240 Chapters, some long and some short with two or three verses. Here and there, some interesting information is available. What is significant is that distances between various places along with specific directions are provided. A folkloric picture of a natural disaster with a famine, perhaps related to a meteorite impact and/or drying up of Sarasvatī river is further elaborated. Thus, we find in Chapter 129, titled *Akṣamāleśvara-māhātmya-varṇanam*;

*kadācit samanuprāpte durbhikṣaḥ kāla-paryayāt |
 ṛṣayaśca mahādevī kṣudhākrāntā vicetasah ||
 sarve cānnam parīpasanto gatāḥ cāṇḍāla-veśmani |
 jñātvānna-saṅgraham tasya prārthayāncakruḥ antyajam ||
 bho bho antyajā mahābuddhe rakṣāsmān anna-dānataḥ |
 prāṇa-sandeham āpannān kṛśāṅgān kṣutprapiḍitān ||* (129.5-7)

Once due to vagaries of time (weather), there was a severe famine and the sages became so desperate for food, they went to the house of a cāṇḍāla who had a store of food and begged him. "Hey! Kindly give us, (emaciated with hunger), food and protect us from death "

Here ensues a conversation between the sages and a *cāṇḍāla*. The sages defend their action of begging food from a low caste person as an emergency measure to protect their lives, and hence not objectionable. They cite examples of sage Bhāradwāja eating beef, Viśvāmitra and Vāmadeva accepting dog's meat, when otherwise they would have died. Finally, the *cāṇḍāla* agrees to give food for one year, provided the best among them consents to marry his daughter. The sages are embarrassed, but agree to the condition as being reasonable. Thus, the best among the sages, Vaśiṣṭha marries Akṣamāla the pious daughter of that *cāṇḍāla*, who later by her spiritual powers distinguished herself as Arundhati. Among the various geographical references, there is mention of a dry river *citrāpatha* near *prabhāsa*, which can be seen, only in the rainy season. A lake called *brahma-kuṇḍa*, rich in chemicals, is described near this river;

*ete rasāśca vividhā drṣyante tatra sarvadā |
 rajatam kṣipyate tatra suvarṇamiva jāyate ||
 pratyakṣameva tatraiva rasāyanam anuttamam |
 paśyanti mānavā devī kautukam tatkṣaṇādbhutam ||
 rasam hi paramam divyam tatrastham ca kalauyuge |
 siddham siddharasam pumsām vyādhinām kṣayakāraḥ ||*(135.35-37)

Various chemicals are present in that lake. Silver thrown into the lake becomes like gold. People look at this as a miracle. There are special chemicals (mercuric compounds?) which, cure men of their diseases.

Chapter 187 enumerates five Prabhāsas namely: i) Prabhāsa; ii) Vṛddha Prabhāsa; iii) Jala Prabhāsa; iv) Kṛtasmara Prabhāsa and v) Bhairava Prabhāsa.

Even though a question is raised about how five Prabhāsas came into existence, no reasons are provided. On the contrary, the story of the *liṅga* (symbol or phallus) of Śiva falling on earth is described.

*tatastatpatitam liṅgam tatkṣaṇāt śaṅkarasya ca |
tasmin prapatite bhūmau prakampata vasundharā ||
kṣubhitāḥ sāgaraḥ sarve maryādām vijahustadā |
śirṇāni giriśṛṅgāni trastāḥ sarve divaukasāḥ || (187.22-23)*

As soon as the liṅga of Śaṅkara fell down, the earth shook. The oceans got disturbed and crossed their boundaries. Peaks of mountains broke down and gods trembled with fear.

In chapter 198, the *liṅga* is cited as the reason for the five Prabhāsas, mentioned above.

*atha kāle ca kasminścid vajrinā 'cchāditam priye |
indrenāgatya vasudham bhayenāgatya sundarī ||
ūṣma tadudbhavo devi nirgacchan avarodhitāḥ |
daśa-koṭi pravistirṇam jvālāgram liṅga-rupa-dhṛk||
prabhāsa-kṣetram āsthāya bhityā āvirbhavam āsthitam|
dhūma-saṅghaiḥ sametastu vyāpayāmāsa tajjagat ||
tataḥ sura-gaṇāḥ sarve ṛṣayo veda-pāragāḥ |
astuvan vividhaiḥ suktaiḥ vedoktaiḥ śaśi-śekharam ||
samharasva sura-śreṣṭha tejaḥ svam dahanātmakam |
na yāvat pralayam yāti tāvadrakṣa sureśvara ||
evam ābhāsamaṇesu tridiveṣu sureśvarī |
tattejaḥ pañcadhāviṣṭam vyāpyāśeṣam jagat-trayam ||
pañca-prabhāsa-rūpena bhityā tatra vasundharām |
yena mārgeṇa niṣkrāntam tanmārge ca mahanmahāḥ ||
tatra taiḥ sthāpitam dvāram supradeśe āsmajam priye |
vihite atha ca randhre 'smin dhūmo nāśamupeyivan || (198.4-7; 9-12)*

Once, Indra covered the liṅga with his vajra weapon. Due to this, the heat (ūṣma) produced by the fire got blocked. A flame in the shape of a liṅga broke open the ground at Prabhāsa and spread all around, with clouds of smoke. Then all the gods and sages prayed to Śiva with vedic hymns. "Great Lord, take back your energy in the form of fire, and protect the world from dissolution". Then the fire

broke the earth at the five Prabhāsas and receded through the same opening. The smoke subsided after the holes were covered with stone slabs.

This story again is that of an object falling from the sky and the resultant widespread fire. The text further drifts into descriptions of various *liṅgas* in and around Prabhāsa, their names and days auspicious for worshipping them. A description, unconnected with other parts of the text, is that of river Ṛṣi-toya. This is supposedly near the hot spring, which forms the eastern boundary of Somanātha region. Ṛṣi-toya is said to be flowing east and merging with the sea. On the bank of this river a city called *Unnata* (presently *Una?*), is described as being an ancient settlement of Brāhmaṇas. So far in PK natural phenomena, which could have lead to catastrophes were described, but nothing about loss of life. In the 346th chapter, there is reference to large-scale loss of life associated most probably with a sea wave or a *tsunami*. This is the story of the *Kālakeya* demons hiding in the ocean and sage Agastya eventually drinking the waters to dry up the ocean.

*kālakeyā iti khyātāḥ trailokyoccheda-kārakāḥ |
hata-śeṣāḥ-samudrānte praviṣṭāḥ bhaya-vihvalaḥ ||
tataste mantrayāmāsuḥ piṅyante devatāḥ katham |
hanyantām dharmiṇo ye 'tra vidyante dharāṇi-tale ||
atha te समयam कृत्वā rātrau niṣkrāmya sāgarāt |
nirjaghnuḥ tāpasān tatra yajña-dāna-ratānprīye ||
prabhāse tu mahādevī tatra dvādaśa-yojane |
vaśiṣṭhasyāśrame tatra maharṣiṇām mahātmanā ||
bhakṣitāni sahasrāṇi pañca-sapta ca tāpasān |
śatāni pañca raibhyasya viśvāmitrasya ṣoḍaśa ||
cyavanasya ca saptaiva jābalerdviśatam muneḥ |
vālakhilyāśrame puṇye ṣaṭ-śatāni durātmaniḥ ||
niḥsvādhyāya-vaṣaṭkārām bhūṭalam samapadyata | (346.4,8-12,16)*

Kālakeyā demons being afraid (of Viṣṇu) hid in the sea. They chalked out a plan to hurt the gods by killing pious people on earth. Finding an opportunity in the night to come out of the sea, they killed those in the Prabhāsa region, for an extent of twelve yojanas. In Vaśiṣṭha-āśrama, twelve thousand persons were eaten away. In Raibhya's place five hundred, in the hermitage of Viśvāmitra sixteen hundred, in Cyavana's place seven hundred, in Jābāla āśrama two hundred and in Vālakhilya-āśrama six hundred people died. Due to this catastrophe, earth became devoid of Vedic learning and practices.

PRABHĀSA AND SARASVATI OF PK

The above description of the text of PK provides what is purported to be the genesis, including a brief geography of Prabhāsa region of Saurāṣṭra. It has to be borne in mind that in ancient times the connotation Saurāṣṭra included the present day Kutch region also. The text narrates five natural phenomena, namely, (a) falling of celestial objects and their intrusion into earth, (b) receding of the sea coast, (c) swelling of the sea leading to wide spread loss of life, (d) a terrestrial fire attributed as the cause of drying of River Sarasvatī, (e) a severe famine. It is not that the text cogently describes any of the above in a systematic fashion. Nevertheless, a reader of PK will be able to surmise that a textual tradition exists to the effect, the northwestern part of India, suffered a great natural disaster. It may be speculated that, this should have been the reason for migration of population out of this region. About the description of the places, if we take Prabhāsa of PK as the place, with the same name (identified with Somanātha) today, some locations such as the *tapta-toya* hot springs and an east flowing river are in order. However, when it comes to the path of Sarasvatī, its link with Somanātha is riddled with contradictions. The path described in Ch. 35.21-47, is reasonably consistent upto present day Rann of Kutch. How the river could have reached, Somanātha (20.9°N 70.5° E) is not explainable from the contents of the text. One has to only speculate that perhaps Sarasvatī had a branch reaching Somanātha, not delineated by PK for some unknown reasons. The statement of Alberuni that a river by name Sarasutī was flowing at Somanātha may lend some support to this assumption². Recently geologists have also speculated on the possibility of the Himalayan Sarasvati reaching the present day Somanātha *alias* Prabhāsa⁹. On the contrary, the conflicting contents of PK might imply that river Sarasvatī reached the sea only in Rann of Kutch. The text of PK contains lengthy chapters, which describe only Prabhāsa. There are also chapters, which mix up Prabhāsa with Soma (moon), Someśa, Someśvara and Somanātha in a rather confusing manner so much so these appear to be later interpolations into an earlier text. A corollary to this would be that the ancient Prabhāsa should have been somewhere along the Gulf of Kutch. Due to severe natural disasters, emigrating people might have founded another town of the same name, along the southwestern coast of present day Saurāṣṭra, and named a near by river notionally as Sarasvatī. Another possibility is that of an existing holy place being renamed as Prabhāsa. This issue will be discussed in detail later. As far as the chronology is concerned, PK is of no help, notwithstanding the postulation of a long time span for creation, in terms of *yuga*, *kalpa*, *manvantara* and *parārdha*, which is a clear anticipation of the modern day geological time scale. The apparent

confusion about the time sequence and about the location of Prabhāsa indicates that PK was not composed in a single period. It is plausible the disaster was so cataclysmic; it led to a long discontinuity and divergence in the cultural traditions of the society. PK, as it is now, perhaps represents a collection of diverse traditions and opinions, in a single place to preserve them to posterity, without attempting to resolve the contradictions. The descriptions of weather change, famine, a falling celestial object, wide spread haze, emanation of gases, and sea waves can not be brushed aside easily as the inventions of the priestly class of ancient India to keep the ignorant masses under their sway. On the other hand, the occurrence of these natural events finds support in the more ancient epic literature. The great epics *Mahābhārata* and *Rāmāyaṇa* contain anecdotes identifiable as rare natural phenomena and in some cases as disasters. Vedic literature starting with *Ṛgveda*, the earliest literary composition of India, also contain references to celestial phenomena and disasters related to ground impact. It is possible PK recounts some older incidents, in a different way. Hence a brief review of such incidents, even if they sound strange and mythological would help in understanding PK better.

MAHĀBHĀRATA¹⁰

In the 66th chapter of *Ādi Parvan*, there appears a description of creation with personification of celestial objects. For example, Moon is supposed to have twentyseven wives, who are ‘eyes of time’ (*kālasya nayane*) and ‘associates of stars’ (*nakṣatra-yoginyah*, v. 17). In a similar tenor it is stated

agneḥ putraḥ kumārastu śrīmān śaravaṇālayaḥ|
ṛttikābhyupapatteśca kṛttikeya iti smṛtaḥ|
tvāṣṭri tu savituḥ bhārya vāḍavā-rūpa-dhāriṇi|
asūyata mahābhāgā sā antarikṣe aśvināvubhau|| (*Ādi. p. 66. 24-25,36*)

Kumāra, son of Fire is located in Śaravaṇa (forest of Śara grass). Due to his birth in Ṛttikās (Pleiades), he is remembered as Kṛttikeya. Tvāṣṭri (daughter of Creator) wife of Sun, having taken the form of a fiery horse-head (vāḍavā), gave birth, in the sky, to (the twins) Aśvins.

The above verses appear in all the editions of MB. Actually two celestial events are indicated here. The first is associated clearly with *ṛttikās* or Pleiades, whereas the second is an object in the form of a horse-head out of which *Aśvins* were born. The word *Vāḍavā* does not occur in *Ṛgveda*. It appears in Vedic literature, in *Aśvalāyana Gṛhya Sūtra*, as a proper name. The popular meaning of this word in

later Sanskrit, is pit-fire, marine-fire¹¹. Its connection with a horse-face, (or a horse without thighs), is attributed to the *Vedas*, for, it is said in MB

tatastam krodha-sanjātam aurvo'gnim varunālaye|
utsasarja sa caivāpa upayunkte mahodadhau||
mahat haya-śiro bhūtvā yattad vedavido viduḥ|
tamagnim udgiran vaktrāt pibatyāpo mahodadhau||(*Ādi.p.*180.21-22)

Then Aurva discharged the fire in the ocean. He having become a big horse-head, as known to those learned in the Vedas, spews fire from his mouth and drinks water in the ocean.

Thus, this form of terrestrial fire called *vāḍava* (same as *bāḍaba*) has had a celestial teleconnection, from very early times. In *Āraṇya parvan*, while describing places of interest (*tīrtha-yātrā*), in Chapter 82, a visit to *bāḍaba* is mentioned after Kashmir and river Vitastā. This is not same as the fire of PK, supposed to be the cause of drying up of river Sarasvatī. Interestingly we have historical evidence that in Kashmir people used to celebrate a periodical festival where food was cooked on a natural fire¹². Another interesting statement in MB is,

tato gaccheta dharmajño himavat-sutam arbudam|
prthivyām yatra vaicchidrām pūrvam āsīdyudhiṣṭhira|| (*Āra.p.* 82.55)

Then, one should go to Arbuda (mountain), son of Himavān, where in the past an opening was in the earth.

This is a clear reference to a crater or opening near Mt.Abu. Ptolemy¹³ knew about this in second century AD. A deep pit at Vaśiṣṭhāśrama, which is traditionally identified to be near Mt.Abu, is mentioned in PK also. After a few more verses, we read about Vinaśana, the place where Sarasvatī supposedly flowed underground, by the side of Meru-hills (ara.p. 82.111). In MB there is no emphatic narration of a fire linked with the vanishing of Sarasvatī. On the other hand, in *Aranya-parvan*, several chapters are devoted to the description of Agni (Fire) in his various aspects. The story of Skanda as the son of a strange fire (Adbhutagni) is narrated in detail. Here a selection of such description is presented.

eṣa raudrasya sanghāto mahān yuktaśca tejasā|
somasya vahni-sūryābhyām adbhuto 'yam samāgamah||
samāhuto hutavahaḥ so'dbhutaḥ sūryamaṇḍalāt||
vinihṣṛtya yayau vahniḥ vāgyato vidhivat prabhuh| (*Āra.p.* 223.19,28)

When Sun and Moon were together (on amāvāsyā), there was a terrific impact along with a light. This meeting of Moon with fire and Sun was a strange phenomenon. A strange fire emanated from Sun and traveled as told by Brahmā (Creator).

The narration personifies a celestial fire (light) with the name Adbhuta (literally strange). In continuation of the above, it is narrated that Adbhuta desired the wives of Seven Sages (Saptarṣi i.e. Ursa Major). There is an ancient myth cited in *Śatapatha Brāhmaṇa*, that *Kṛttikās* were denoted as wives of *Saptarṣis*. Thus in this story a strange fire is associated with Pleiades. However, Svāhā (a daughter of Dakṣa) approaches Adbhuta in disguise, to collect his energy and to land on earth in the form of a bird *Suparṇī*. MB presents this as a historical event to have occurred much before its own period. If believed, the birth of *Kārtikeya* would indicate an exploding or a brightening star. It is said that, Skānda grew bigger day by day for five days.

*dviṭīyāyām abhivyaktaḥ tṛtīyāyām śísurbabhau|
 aṅga-pratyāṅga sambhūtaḥ caturthyām abhavat guhaha||
 lohitaḥbhreṇa mahatā samvṛtaḥ saha vidyutā|
 lohitaḥbhre sumahati bhāti sūrya ivoditaḥ||
 tāvātapantau sampreksya sabālo `rkasamadyutiḥ|
 dvābhyām bhujābhyām ākāśam bahuśo abhijaghānaha||
 krīḍān bhāti mahāsenah trin lokān vadanaiḥ piban|
 parvatāgre aprameyātma raśmimān udaye yathā
 sa paśyan vividhān bhāvān cakāra ninādam punaḥ
 tasya tam ninādam śrutvā apatan bahudhā janāḥ||
 sa tadā vimalā saktiḥ kṣiptā tena mahātmanā|
 bibheda śikharam ghoram śvetasya tarasā gireḥ||
 tataḥ pravayathitā bhūmiḥ vyśīryata samantataḥ||
 athainam abhajaḥlokaḥ skandam śuklasya pañcamim||*

(Ara.p.224.20,24,26,28,30,37,38,40)

He manifested on the second day, became a child on the third and acquired his limbs on the fourth day... He is covered with a huge metallic glow and lightning. He shines in the reddish sky like the rising sun.... That boy, equivalent to Sun in his light, hit the sky several times with his two hands. Mahāsenā, playing as though drinking the three worlds with his mouth, shines at the top of the mountain like Sun in the morning. He made a loud sound, hearing which large number of people fell down.... Then, that spear projected by him, broke the peak of White

Mountain. The tormented earth broke in many places...then, people worshipped him as Skanda, who fell down on the fifth day of the bright fortnight.

Even though the narration indicates that the celestial event was followed with disastrous effects on earth, difficulty in separating myth from reality is apparent. There are different versions of the same episode available in MB, giving a feeling that the celestial and terrestrial events might have been mixed up in popular imagination. It is further said in the epic that a war broke out between gods and demons. This may be an allusion to falling objects, which were perhaps thought to be originating from the region around Pleiades. The anecdote is continued in the next chapter indicating change in weather.

*tasmin jāte mahāsatve mahāsene mahābale|
 samutthasthuḥ mahotpātāḥ ghora-rupāḥ pṛthagvidhāḥ||
 stripumsoḥ viparitāmca tathā dvandvāni yani ca|
 graha-diptādi śankhamca rarāsāca mahī bhṛsam||
 nīvasanti vane ye tu tasmin caitrarathe janāḥ|
 te bruvanneṣa so 'narthāḥ pāvakenahito mahān||
 apare gāruḍim ahuḥ tvayānarthoyam āhṛtaḥ| (Āra.p. 225.1-5)*

While the strong Mahāsena was born, there were great disasters of different kinds. Opposition between men and women and similar inversion of dual phenomenon occurred. Planets blazed and earth groaned strongly. People living near that Caitraratha forest, said that all these bad happenings were brought about by Fire. Others, blamed Gāruḍī for the calamities.

The above verses are interesting, in that there were people who thought differently about the same event. The so-called inversion of dual phenomena (this verse does not find a place in the critical edition from Pune) has been interpreted to mean 'summer became winter and winter became summer', by later commentators. This also hints at the possibility of the flying *Gāruḍī* or *Suparṇī* to be a meteorite impacting the ground leading to calamities. The place Caitraratha is traditionally identified as the region, in the upper reaches of Sarasvatī River, towards Himālayas. The event, whenever it might have occurred, should have been of great import to the various groups of people populating the country. We find the same basic episode, described in different ways in later chapters also. In chapter 230, Skānda is described as son of Rudra and

“*Rudra, embraced his son and released him. As Skanda was released, a big disaster took place and this suddenly stunned the gods. The sky and stars burnt and the universe was paralysed.... Skanda (or Mahāsenā) came burning with anger like Sun. Mahāsenā released the spear (sakti). That spear removed the head of demon Mahiṣa. The fallen head created a passage sixteen yojanas long, but being obstructed by the falling mountain, remained unpassable. However, now the people of Uttara-kuru, travel through that path easily.*”

(*Āra.p.* 230. 59,60,93,96-99)

Again, we come across the episode of Kārtikeya in *Śalya parvan*, during the travelogue of Balarāma along the course of Sarasvatī. The story is similar to what was described above, with minor differences. Here, Kārtikeya is said to have split into four parts, called Skāndha, Śākha, Viśākha, and Naigameya (*Sal.p.* 45.39-40). As per the description in this *parvan*, the last part namely, fiery Naigameya arrived in Gaṅgā. This notation Naigameya (one related to Nigama or Veda) is indicative of a connection of this episode with Vedas, which will be discussed later. Once again a battle between Kārtikeya and a demon, this time called, Bāṇa is narrated. During this fight, Kārtikeya is described as breaking Mt.Kraunca, with the spear given by Fire (*Sal.p.* 47.84). In *Salya-parvan* itself, the story of sage Sārasvata and a severe famine, which affected the region around River Sarasvatī find mention.

*atha kāle vyatikrānte mahatyati bhayankare |
anāvṛṣṭiḥ anuprāptā rājan dvādaśa vārṣiki |
tasyām dvādaśa-vārṣikyām anāvṛṣṭyām maharṣayaḥ |
vṛtyartham pradraṇvan rājan kṣudhārtā sarvato diśam ||*

(*Sal.p.* 52.37-38)

After some time, a severe drought occurred for a period of twelve years. In that drought great sages affected by hunger, searching for sustenance, went in all directions.

This famine is described in detail again in *Śānti-parvan*, chapter 139. Here a few verses are quoted to highlight the realistic tone of the text. Bhīṣma is supposed to tell Yudiṣṭhira,

*atrāpi udāharantīmam itihāsam purātanam
viśvāmitrasya samvādam cāṇḍālasya ca pakkane ||
tretā-dvāparayoḥ sandhau tadā devavidhikramāt |
anāvṛṣṭiḥ abhūt ghorā loke dvādaśa-vārṣikā ||*

*prajānām ati-vṛddhānām yugānte samupasthite|
 tretā-vimokṣa samaye dvāpara-pratipādane||
 na vavaṛṣa sahasrākṣaḥ pratilomo 'bhavadguruh|
 jagāma dakṣiṇam mārgam somo vyāvṛtta-lakṣaṇaḥ||
 sarāmsi saritaścaiva kupāḥ prasravṇāni ca|
 hata-tviṣo na lakṣyante nisargāt daiva-kāritāt||
 upa-śuṣka-jala-sthāyā vinivṛtta sabhā prapā|
 nivṛtta-yajña-svādhyāyā niṛvaṣaṭkāra-marṅgalā||
 ucchinna-kṛṣi-gorakṣā nivṛtta-vipaṇāpanā|
 nivṛtta-yupa-sambhārā vipraṇaṣṭa-mahotsavā||
 asthi-sañcaya-sankīṛṇa mahābhūta-ravākulā|
 śūnya-bhūyiṣṭha-nāgarā dagdha-grāma-niveśanā||* (Śān.p. 141.12-20)

Even now, people cite the ancient historical discourse of Viśvāmitra in the settlement of the Caṇḍāla. At the junction of Tretāyuga and Dvāparayuga, a twelve year long drought occurred. There was no rainfall and Jupiter was retrograde. Moon went south being eclipsed. Lakes, rivers, wells and springs with no water were not seen due to nature's wrath. Reservoirs dried up, assemblies (of people) dissolved, and scholarly studies, sacrifices and celebrations were withdrawn. Agriculture, diary, and commerce were given up. Empty cities and burnt down villages filled with the cries of goblins, became collecting places of bones.

The picture presented is that of a horrible famine. As per the text, sage Viśvāmitra stole dog meat during this famine, unable to bear the pangs of hunger. In the same book after a few more chapters, Nakula is supposed to ask Bhīṣma about the importance of 'sword'. Here again a celestial event connected with Pleiades is described.

*candramā vimala-vyoma yathābhyudita-tārakam|
 vikīryāgnim tathābhūtam utthitam śrūyate tadā||
 tasmin utpata-māne ca pracacāla vasundharā|
 mahormi-kalitāvartāḥ cuksubhe sa mahodadhiḥ||
 cacāra vividhān mārgān mahābala parākramaḥ|
 vidhunvan asim ākāśe tathā yuddha cikirṣayā||
 kṛttikāstasya nakṣatram aseragniśca daivatam|
 rohiṇim gotramāsthāpya rudraśca gurusattamaḥ||*

(Śān.p.160.37,40,52,82)

When the sky was clear with moon and stars, it is said that Asi (sword) arose, emitting fire. As it arose, the earth shook and the oceans got disturbed. Displaying the sword in the sky, being intent on a battle, (Rudra) moved in various directions. For Asi, Kṛttikā is the birth star; Agni (fire) is the god; Rohinī (Aldebaran) is the clan and Rudra is the teacher.

This myth is again that of a celestial object, since it is said that Brahmā (Creator) assured the gods and sages that he had intentionally created this *Asi*, which means sword or spear. The sword is given to Rudra the deity of constellation Ardrā (Orion) to fight the demons. The further verses indicate that a metallic object eventually landed on earth, leading to earthquakes and disturbances in the oceans. Names of twenty-eight kings, who were recipients of the original sword in succession, are listed, starting from Manu the first king. This list ends with Kṛpa, the teacher of Pāṇḍavas and Kauravas. The above myths of *Mahābhārata* are all similar in indicating that a long time before the MB period, a strange fire was observed in the sky. It may be surmised that, this event could have been variously interpreted by different groups of people. As MB passed through many bards and copyists, differing traditions of Kārtikeya, might have found their place in the epic. In any case, a celestial light or object (nova) associated with Pleiades, should have given rise to all further imaginative descriptions. It is probable that this was followed (not necessarily immediately) by a meteor, thought to be originating from a near by region (Taurus) of the sky, hitting a populated part of the country leading to a famine.

RĀMĀYANA¹⁴

The legend of Kārtikeya mentioned in *Bāla-kāṇḍa* (Ch.36.16-19) can be recognized as a celestial phenomenon, even though it is not as dramatic as in MB. There is reference to River Sarasvatī and River Gaṅgā as flowing next to each other in *Ayodhyā-kāṇḍa* (Ch.71). However, in *Yuddha-kāṇḍa* (Ch.22), the desertification of the land of Abhiras in the northwestern part of India is attributed to Rama's anger against the southern sea.

VEDIC LITERATURE

Fire or Agni is a prominent god in the Vedas. He is not same as Sun, even though, similarities are present. He is connected with heaven and earth in a unique way. In interpreting the word *arati*, which is used only with reference to Agni, twentyone relations have been identified between Agni on one side and heaven and earth on the other side¹⁵. All of these highlight presence of Agni as a bright light in the

sky, in a physical sense also. The available Vedic literature, comprising of Samhitās, Brāhmaṇas, Upaniṣads and subsidiary texts is too vast for a brief review. The attempt here is only to point out a few hymns of Ṛgveda addressed to Agni, meanings of which have close resemblance to the type of celestial phenomena under discussion. We read in the first book of Ṛgveda¹⁶

“Tvastar’s ten daughters, vigilant and youthful, produced this Infant borne to sundry quarters”.

“Three several places of his birth they honour, in mid-air, in the heaven, and in the water”.

“Who of you knows this secret One? The Infant by his own nature hath brought forth his Mothers”.

“Like Savitar his arms with might he stretches; awful, he strives grasping the world’s two borders. He forces out from all a brilliant vesture, yea, from his Mothers draws he forth new raiment”. (I.95.2,3,4,7)

“The beloved (Agni), strong, rich in food, rests in the brilliant (sun); secondly, in the seven auspicious mothers.”

“Then also entered he the Mothers, and in them pure and uninjured he increased in magnitude.” (I. 141.2;5)

In the second book, hymn (II.2.2) says Agni shines day and night. He also increases in size, for;

“Him have they set in his own dwelling, in the vault, like the Moon waxing, fulgent, in the realm of air.” (II.2.4)

In the ninth and tenth books, Agni is the child of Seven Sisters, by which the star group Pleiades is meant. Moreover, he could be seen along with the sun.

“The Sisters Seven, the Mothers, stand around the Babe, the noble, new-born Infant,..” (IX. 86.36)

“High hath the Mighty risen before the dawning, and come to us with light from out the darkness. Fair-shapen Agni with white-shining splendour hath filled at birth all human habitations.” (X.1.1)

“He shines, all-knowing, with his lofty splendour: chasing black Night he comes with white-rayed Morning.” (X.3.1)

“When he surpassed with his splendour the Dark and the White, bringing forth the woman born of the great father and holding firm the ray, raised high, of the

sun, the brilliant one (Agni) shines with the bright ones of Heaven” (X.3.2) ¹⁵
“He, calling loudly to the Seven red Sisters, hath, skilled in sweet drink, brought them to be looked on. He, born of old, in middle air hath halted, and sought and found the covering robe of Pusan”. (X.5.5)

Reference to a fiery celestial object falling on earth is also found in the tenth book.

Divyā angāri iriṇe nyuptāḥ sitāḥ santo hṛdayam nirdahanti/
 (X.34.9)

This means, ‘heavenly charcoals having ploughed into Iriṇa, burn the heart’, where Iriṇa should refer to a locality and not ‘dice-board’ as interpreted by Griffith¹⁶ and a few others. The real meaning of the word Iriṇa, is of considerable interest and will be discussed later. In the seventh book, attributed to the authorship of Vaiṣiṣṭha(s), indications of calamities, fire spread and falling objects are found. A few verses from the translation of Velankar¹⁷ are as follows.

“Out of fear for you, the dark-skinned tribes went away helter-skelter, abandoning their possessions, when, O Vaiśvānara, you blazed forth, shining for Puru and battering the forts (of his enemies) O Agni.” (VII. 5.3)

“O Indra and Soma, do hurl down from the heaven; do you strike down in the abyss the voracious demons, with your never aging (weapons), which are heated with fire, which kill with stones and which are destructive by their heat.”
 (VII.104.5)

The above verse from the famed *rakṣoghna* hymn can be interpreted as a description of meteorites falling on earth, similar to the demons Dhūmra and others of PK going underground. There are verses that hint at difficulties faced due to Varuṇa (god of Oceans or Waters).

“And when I had gone within his presence, I considered Varuṇa’s face to be that of Agni (through anger). May the sovereign ruler take me to see the great wonder, namely, what the sun and the darkness are in the rocky caves.”
 (VII.88.2)

“May I not go to the house of clay, O king Varuṇa;,have mercy”
“When I go forth, bursting as it were like a fully inflated skin-bag, ...have mercy.”
“Thirst has attacked your singer, while yet he stands in the midst of waters; have mercy”
 (VII.89.1,2,4)

Indication of a famine is indirect, as when Vāmadeva says,
“In deep distress I cooked a dog’s intestines. Among the Gods I found not one to comfort.”
 (IV.18.13)¹⁶

Another reference to a famine, in the Vedic literature, appears in *Chāndogya Upaniṣad* (I.10.1), when the Kurus were destroyed, hit by a shower of stones and Uṣasti Cākṛāyana ate food in the village of elephant catchers (*ibhya-grāma*). Kosambi¹⁸, discussing the above two texts, interprets “...the Brāhmin could take soiled food from the lowest caste only in times of unutterable famine.”

DISCUSSION

The main purpose of the present work has been to review *Prabhāsa-khaṇḍa* of *Skānda-purāṇa*. To understand the historical background with which PK might have been composed it became necessary to review the epics, particularly *Mahābhārata*. This in turn necessitated a brief review of *Ṛgveda*, for clues on observation of natural phenomena in ancient India. It may be appropriate to mention here that there is clear evidence in *Ṛgveda* for sage Atri having observed a total solar eclipse (V.40.5). It is easily seen from the verses cited previously, that the birth of Agni in *Ṛgveda* to the seven red sisters, should be same as the birth of Kārtikeya to Kṛttikās in MB. Both the texts indicate that the object in the sky was comparable to the sun in brilliance. In *Ṛgveda*, it is said that the object waxed like the moon; while, as per MB it increased in its brilliance for five days. Thus, there is a strong case for identifying the phenomenon as an explosion or brightening of a star. The memory of this event perhaps was waning by the time PK was composed, since in PK there is only an unconnected statement to the effect that a demon was born in Pleiades (...*samutpannaḥ kṛttikāsu niśācaraḥ*// 20.45). Eventhough there are references to falling objects and weapons from the heavens in *Ṛgveda*, they are not as categorical as in MB and PK. In MB, the birth of Kārtikeya is almost immediately followed by his falling on earth as Skānda. PK denotes the heavenly objects falling on earth, as demons hit by Sun. Such differences would only go to indicate that some important events have been variously interpreted and merging traditions in course of time have brought up still newer myths. Hence, the texts taken together indicate a meteorite hitting the earth at an unknown time, which perhaps caused considerable destruction in the country. Vedas as is well known, promote a way of life with fire as the vehicle of worship. We read in *Atharva Veda*¹⁵,

*pramuñcanto bhuvanasya reto gātum dhatta yajamānāya devaḥ|
upakṛtam sāsamānam yad asthāt priyam devānām api etu pathaḥ||*
(2.34.2)

“Do ye, releasing the seed of being, (*bhūvanasya reto*), show the way to the sacrificer O gods: what, brought here and immolated, stood up, living, let it go to the own abode of the gods.”

This hymn may mean that, what fell down from the heavens was interpreted, at least by some, to be the essence of the universe. Vedic sacrifices (*yajña*) originated in analogy with cosmic phenomena (e.g. *Fire Altar as Prajāpati and as Year*), a few of which at least were celestial happenings. After observing a *nova* and a falling meteorite, it was perhaps natural for the esoterically minded followers of the Veda to hail Agni as the messenger from the heavens. However, others (*āgamikās*) perhaps physicalized the falling object as *reta* (semen) or *liṅga* (phallus) or *śakti* (power) of Rudra and took the phenomenon to herald the arrival (*āgama*) of his son, Kumāra. Nevertheless, all the texts are unanimous in indicating serious distress in the society due to a famine. The texts also strongly hint that this should have been due to ground impact caused by the heavenly object. Interestingly, PK attributes the famine and distress more to the recession and swelling of the sea.

Place of Occurrence

On the question of the place and time of occurrence of the events, none of the texts provides any direct information. We can nevertheless surmise that the disasters should have taken place broadly in the northwestern part of the country, with particular reference to the border regions between Rajasthan and Gujarat, including Kutch. PK starts with Prabhāsa on Saurāṣṭra coast, but describes more accurately, the course taken by river Sarasvatī from Himālayas through Sthāneśvar, Kurukṣetra and Arbudāraṇya, ending up in Rann of Kutch. PK refers to Prabhāsa as the best among the holy places in the desert (*uṣara-kṣetra*). Its naming of five Prabhāsa, including one called Vṛddha (old) Prabhāsa, but failing to give their locations, adds to the suspicion that Sarasvatī in ancient times, did not reach the present day Somanātha. This is not to say that there was no Prabhāsa, but only it was in some other place, probably in Rann of Kutch. This region even as it is now, fits in with the description in PK of a dried up sea. PK mentions of a lake containing *rasa* or mercury near Prabhāsa (Ch.135.35-37) cited already. Kardama Mountain, which is said to contain cinnabar as per *Rasārṇavakalpa*¹⁹, has been identified as being near Siddhapura (24°N,

72.5°E) by Murthy²⁰ a geologist from Geological Survey of India. Another curious information as per the official Survey of India map of Gujarat is of interest here. A place called *Mūla Dvārakā* (*original Dvārakā*) exists along the west coast, below Somanātha. B.C.Law²¹ in his book, *Historical Geography of Ancient India* informs that Kṛṣṇa's Dvāravati was originally situated near the mountain Girnar, but in later times, it has been recognized as Dvārakā on the seashore on the extreme west coast of Kathiawad. This means that the present day Dvārakā was not considered the original Dvārakā by many people. What could be the reason for this? A careful reading of MB text helps one to conclude that Prabhāsa and Dvārakā should have been close to each other. Hence, identification and integration of the destroyed ancient Prabhāsa emotionally with Somanātha, might have lead to the naming of a near by place as *Mūla Dvārakā*. Thus, PK has internal evidences to show that the disastrous events were not along the present day Saurāṣṭra coast, but in the Kutch-Mahesana region. *Rāmāyaṇa* indicates that the land of Abhiras became a desert. MB puts the place of vanishing of River Sarasvatī near the land of Abhiras. As per MB, Abhiras attacked Arjuna on his way back from Dvārakā, after the passing away of Kṛṣṇa. Kosambi²² with his incisive approach to MB text cites this as an evidence to argue that Kṛṣṇa's Dvārakā could not have been at its currently assigned location. PK does not contradict this inference, since Sarasvatī is said to have passed through Dvāravati, before reaching Prabhāsa. In the tenth book of *Ṛgveda*, the stray verse about *heavenly charcoals* ploughing through *Irina* is intriguing. The word *Irina* is phonetically connected with Rin or Ran (of Kutch), which would mean this was the place where some fiery objects should have fallen. This word occurs in *Śatapatha Brāhmaṇa* (V.2.3.2), where it is interpreted as a self produced hollow or cleft, the residence of deity Niṛti who presides over destruction²⁵. *Periplus of the Erythrean Sea*²³, which is an ancient account of a voyage along the coast of India, refers to the Gulf of Kutch as *Eirion*, which can be recognized as the *Irina* of *Ṛgveda*. This conclusion is also supported by what Ptolemy had to say about the geography of India¹³. It is known that Ptolemy collected his information from travellers and from contemporary Indian sources. Thus, place names and locations currently forgotten, but remembered by the ancient society, are found on his map of India. The important among these for our discussion are Sarbana, Ordabari and Theophila. Sarbana is undoubtedly Śaravana in Sanskrit, celebrated as the place of birth of Kārtikeya. As per McCrindle "... the position of Xodrake and the other places in the list must be sought for in the neighbourhood of Ran of Kachh. Xodrake and Sarbana have not

been identified, but Yule doubtfully places the latter on the Sambhar lake.” Further, Orbadarou is identified with Arbuda or Mt. Abu. The identification of Theophila meaning ‘dear to God’ in Greek has not been possible, because, this is the translation or explanation of a Sanskrit name. There is no mention of Prabhāsa or Dvāravati in the list, but arguably, either of them have a claim to be called Theophila. PK, mentions Vaśiṣṭhāśrama, which is traditionally near Mt. Abu, as being near Prabhāsa. The crater near this place mentioned in the *arbuda-khaṇḍa* of PK, should be same as the one mentioned by MB to be in *Arbuda*. Ptolemy refers to Mt. Abu by two names Apokopa *alias* punishment-of-gods. The former name in Greek means primarily ‘what has been cut off’. As per McCrindle¹³ “ It (Mt. Abu) was mentioned by Megasthenes in a passage which has been preserved by Pliny who calls it Mons Capitalia i.e. the ‘Mount of capital Punishment’ a name which has an obvious relation to the by-name which Ptolemy gives it, *the punishment of the gods.*” This interpretation, fits in with the description in PK and MB about breaking of mountains and destruction of Vaśiṣṭha’s settlement near Prabhāsa. We find some interesting references to this part of the country, in the travels of the Chinese pilgrim Yuan Chwang, who visited India during 629-645 AD. He does not mention either Prabhāsa or Somanātha. However, Thomas Watters²⁴ the translator of the Chinese account informs; “The narrative in the Records proceeds to relate that from Bharukhachcha the pilgrim went north-west above 2000 *li* to the *Mo-la-po* country...It was situated on the south-east side of the *Mo-ha* river.....About 20 *li* north-west from the capital was the *brāhmin’s town*, and beside it the *Pit of Descent*; the torrents of summer and autumn never fill the latter, and its side was a small tope. The pilgrim then gives the local legend of the proud blasphemous brāhmin of the town who went down alive into hell at the spot where the Pit appeared.” We see here again clearly reminiscences of a pit through which a celestial object (demon) went underground near Prabhāsa as per PK. The country, which the Chinese traveller visited, has been identified as a kingdom of Western India lying between Broach, Kutch, Valabhi and Anandapura²⁴. It is known that during the seventh century AD in this area, which overlaps with the present day Mahesana district of Gujarat, Buddhism was flourishing. Thus, it was natural for Yuan Chwang to refer to the legend in a way supportive of Buddhism. The place with which his *Brāhmin’s town* can be identified is *Brāhman-waḍa* (23.6°N, 72°E) west of Mahesana. Thus, all the ancient literature reviewed so far points to the region around (23.5°N, 71.5°E) as the scene of the natural disasters described in PK and hence as also the likely location of the ancient Prabhāsa Kṣetra, where River Sarasvatī joined the sea.

Time of Occurrence

From the texts cited it is impossible to fix up any kind of dating for the celestial phenomenon of *Agni* (fire) in *Kṛttikās*, or for ground impact due to falling objects. An indirect approach has to be adopted to address this question. It is well recognized that Vedic rituals are codified in the *Brāhmaṇa* literature composed after the *Saṃhitās*. Hence, it would be most appropriate to ask the question, whether the fact of observing fire in *Kṛttikās* as inferred from *Ṛgveda*, finds support in the later texts. *Śatapatha Brāhmaṇa*, provides evidence that the *Agnyādhāna* ritual was based on such an observation. The relevant verses as translated by Eggeling²⁵ are as follows.

“He may set up the two fires under the *Kṛttikās*; for they, the *Kṛttikās* are doubtless *Agni*’s asterism, so that if he sets up his fires under *Agni*’s asterism, (he will bring about) a correspondence (between his fires and the asterism): for this reason he may set up his fires under the *Kṛttikās*.” (II.1.2 .1)

“Moreover, the other lunar asterisms (consist of) one, two, three or four (stars), so that the *Kṛttikās* are the most numerous (of asterisms): hence he thereby obtains an abundance. For this reason he may set up his fires under the *Kṛttikās*.” (II.1.2 .2)

“And again, they do not move away from the eastern quarter, whilst the other asterisms do move from the eastern quarter. Thus his (two fires) are established in the eastern quarter: for this reason he may set up his fires under the *Kṛttikās*.” (II.1.2 .3)

“On the other hand (it is argued) why he should not set up the fires under the *Kṛttikās*. Originally, namely, the latter were the wives of the Bears (*ṛkṣa*); for the seven *Ṛṣis* were in former times called the *Ṛkṣas* (bears). They were however, precluded from intercourse (with their husbands), for the latter, the seven *Ṛṣis*, rise in the north, and they (the *Kṛttikās*) in the east. Now it is a misfortune for one to be precluded from intercourse (with his wife): he should therefore not set up his fires under the *Kṛttikās*, lest he should thereby be precluded from intercourse.” (II.1.2. 4)

“But he may nevertheless set up(his fire under *Kṛttikās*); for *Agni* doubtless is their mate, and it is with *Agni* that they have intercourse; for this reason he may set up (the fire under the *Kṛttikās*)” (II.1.2 .5)

The first of the above is a clear enunciation of a celestial model for the ritual under consideration. There is an assertion that there is fire in Pleiades, which should have been based on an accepted fact or traditional knowledge. If a doubt prevails, in line with popular belief that this might be an imaginary or mystical statement, it is

removed in the fourth verse. This is significant in that a critic questions the basis of the model, on which the starting of the ritual was being proposed. What he points out, as a weakness in the model, is the lack of physical nearness between U.Major and Pleiades. In answer to this, the fifth verse confirms the presence of Fire in Kṛttikās in an intimate physical sense, implying this to be sufficient reason for the validity of the proposal. Even though, other asterisms were permitted for the ritual the pride of place was for Kṛttikās only. The second verse, establishes that the Seven Sisters of *Ṛgveda Saṃhitā* were infact the star cluster Kṛttikā that arose in the east. The third verse is a statement considered helpful in fixing a time epoch for the observation of Pleiades rising in the east. S.B.Dikshit²⁶ a renowned Sanskrit scholar of 19th century, by astronomical calculations, found that such a perfect eastern position for Pleiades would have been observable in India around 3000 BC. More recently, N.Achar²⁷ has demonstrated using modern planetarium softwares that the stated position fits in accurately for 2926 BC. The most conservative interpretation of Kṛttikā being in the east would refer to its heliacal rising at the vernal equinox. Parpola²⁸ in his monograph on deciphering of the Indus script, observes that Kṛttikā was exactly at the equinoctial point c. 2240 BC, and that it was the star nearest to the equinoctial point during 2720-1760 BC. In any case, the physical observation of a blaze in Kṛttikā, as described in *Ṛgveda*, should have been earlier than the *Agnyādhāna* ritual and the composition of *Śatapatha Brāhmaṇa* text. This would put the probable time-period of observation of the *nova* to c. 2500-3000 BC or even earlier. There is again no clue to when the ground impact and fire due to a falling object might have taken place. The tenth book of *Ṛgveda*, where the falling of a fiery object finds mention, is generally considered a relatively late composition. Moreover, the books of *Ṛgveda* are organized along family lines with an unknown chronological order. Hence, considerable time might have elapsed between the above two events, eventhough no definitive conclusion is possible. MB mentions the two events as though they were historical and consecutive. Thus, the ground impact including the crater near Mt.Abu should have been much before the central theme of MB. Unfortunately, the date of MB has remained undecided. Recently, the present author²⁹ has shown that, the eclipses and planetary positions mentioned in MB are compatible with the epoch 1443-1493 BC. This would indicate that the impact should have occurred prior to this period, in a broad time window of a few centuries. If we take the statement in *Śānti Parvan* of MB that twentyeight persons were in possession of *Asi* as a historical statement and assign, on an average, twentyfive years of possession to each person then it follows this event could have occurred in 1800-2200 BC. A more precise

estimation of the date, based on the above literature alone, appears not possible. About River Sarasvatī PK gives a plausible course of flow. This matches reasonably well, with what modern geologists have surmised as the possible flow route³⁰. The river should have started from Himalayas and flown through Kurukṣetra, with several tributaries. A tributary (Mandākinī?) originating in the Aravalis should have joined the river downhill of Mt. Abu. Severe ground upheavals, reasons for which included a meteorite impact, should have caused Sarasvatī to slowly dry up and eventually vanish near Vināśana of MB. The tributary from Mt. Abu continues to flow, known by the name Sarasvatī, in the official Survey of India map of the State of Gujarat.

SUMMARY AND CONCLUDING REMARKS

Prabhāsa-khaṇḍa, traditionally considered as a part of *Skāṇḍa-purāṇa* contains interesting information about natural disasters, which should have affected the northwestern part of India in the remote past. Eventhough, the narration is mythological in format, the contents are such that the narrated events should have actually taken place and the memory passed on from generation to generation in the form of folk stories and anecdotes. All the incidents mentioned in PK find place in one form or other in MB and to some extent in *Ṛgveda*. However, there are considerable differences in the details and hence these texts perhaps represent different traditions. The observation of *Fire* in Kṛttikā finds mention in *Ṛgveda*, *Śatapatha Brāhmaṇa*, MB and PK. The first two, properly belonging to Vedic literature do not propound this as the birth of a god or a divine being with form, whereas both *Rāmāyaṇa* and MB refer to this event as the birth of Kārtikeya, who is a popular deity of the Hindu pantheon. The description in MB is vivid and detailed. From the way the event is described, it is conjectured that this should have been an observation of brightening of a star (*nova*) in the cluster of Pleiades. Astrophysicists may be in a position to evaluate the veracity of the observation of this event in scientific terms. PK cursorily refers to this event, but dwells more on the ground openings caused due to impact of falling objects. Perhaps these were meteorite impacts, which caused considerable direct destruction and in addition generated sea waves. MB supports the story of impact and in one place goes to the extent of informing that a metallic object landed on earth. The implication is that this was the sword (*Vel* or *Śakti*) of Kārtikeya, who is known by the names *Velāyudha* and *Śaktidhara*. All the texts are unanimous that subsequently there was a severe famine leading to prolonged misery in the society. The place of occurrence of the impact and related phenomenon should have been in the Kutch-

Mt.Abu region. There are evidences in *R̥gveda*, MB, and PK to this effect. It follows that the present day Prabhāsa, popularly identified with Somanātha, was not the original site of ancient Prabhāsa. Archaeological investigations at the ancient site, near (23.5°N, 71.5°E), should lead to interesting new information.

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