

# Plants in the works of the three sages of Samskrit Grammar

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Panini, Katyayana and Patanjali are the three sages (Muni-Traya) in the field of Samskrit Grammar. They are historically as important as Brhatrayi in Ayurveda. The dates of these figures are more or less decided and as such their evidences are historically valuable. There is a considerable number of plants mentioned in these works which show their popularity in these periods.

## Panini :

Although various systems of grammar were prevalent beforehand, Panini gave a new shape and order to it, which characterises strict discipline in science of Language and Grammar. It became the discipline of disciplines and hence called as 'Śabdānuśāsana.'

Panini is placed in 7th or 5th Cent. B.C. His work Aṣṭādhyāyī - contains valuable information regarding plants and plant sciences. In Vedic times, the plant kingdom was generally divided in two broad divisions- Oṣadhi (herbs&shrubs) and Vanaspati. (tree) Panini, following the same tradition, made similar classification only replacing the word 'Vanaspati' by 'Vṛkṣa' somewhere as is evident from the Sūtras 8.4.6 विभाषोषधि-वनस्पतिभ्यः and 4.8.133 अवयवे च प्राण्योषधिवृक्षेभ्यः : Though he has mentioned the word "Virud" in Nyankvādi Gaṇa (7.3.53), the word 'Vānaspatya' has been used in the sense of a collection of plants वनस्पतीनां समूहः वानस्पत्यम्. It is to be noted that in the chapter of classification of plants, Susruta preferred the word 'Vṛkṣa' instead of 'Vanaspatya' (as given by Caraka) like Panini.

The properties of plants have been mentioned in several Gaṇas like Dṛḍhādi (5.1.123), Pṛthvādi (5.1.122), Brāhmaṇādi (5.1.124), Arśādi (5.2.127).

Panini has mentioned a large number of plants in various Gaṇas. Though the basis is mostly linguistic similarity, some botanical similarity is also observed in them. The following instances would suffice to show it :-

1. Palāśādigaṇa - It contains Palāśā and other similar trees like Khadira, Śirisa, Śimśapā, Syandana etc.
2. Plakṣādi Gaṇa - contains Ficus plants such as Plakṣa, Nyagrodha and Aśvattha
3. Haritakyādi Gaṇa - It contains fruiting plants like Haritakī, Drākṣā, Ciñca etc.
4. Kiśārādi Gaṇa - Contains aromatic substances like Keśara, Jaṭāmāṅsi, Tagara etc.

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He has prescribed the feminine suffix डीष् in the words ending with पाक्, कर्ण, पर्ण, पुष्प, फल, मूल, and ताल (4.1.64). This group contains mainly the medicinal plants such as Ōdanapākī, Śālaparṇī, Śankhapuṣpi etc.

It may be a coincidence that Suśruta named the Gaṇas on the similar pattern as Vidārigandhādi, Pippalyādi etc.

Information is also obtained from Panini's work on trade and commerce of plant Products. The Sutra 5.1.77 (उत्तरपथेना हृतञ्च) indicates the substances which were imported by Northern highway.

The word 'Dravya' derived from 'Dru'(plant), indicates the predominance of plant products used as drugs (दोरञ्च -4.3.161).

A list of plants mentioned in Panini's Aṣṭādhyāyī is given here :-

Panini's Aṣṭādhyāyī (SUTRAS) :-

1. Akṣa - 2.1.10, 6.3.104.
2. Aṇu - 5.2.4.
3. Aswattha - 4.2.22, 3.48.
4. Āṇḍīra - 5.2.111.
5. Āmra - 8.4.5.
6. Ikṣu - 8.4.5.
7. Umā - 4.3.158; 5.2.4
8. Kaṭuka - 6.2.126
9. Kāṇḍīra - 5.2.111
10. Kāraskara - 6.1.156
11. Kārśya - 8.4.5
12. Kālakuṭa - 4.8.173
13. Kāśa - 4.2.80; 6.2.82; 6.3.123
14. Kimsuluka - 6.3.117
15. Kumuda - 4.2.80, 87.
16. Kulathaka - 4.4.3
17. Kuśa - 4.1.42; 5.3.105; 8.3.97
18. Kustumburu - 6.1.143
19. Khadira - 8.4.5
20. Jatu - 4.3.138
21. Jambū - 4.3.165
22. Jivanta - 4.1.103
23. Tāla - 4.3.152
24. Tila - 4.3.149; 5.1.7; 5.2.4; 6.3.71
25. Darbha - 4.1.102
26. Naḍa - 4.2.87; 91
27. Palāśa - 4.3.141, 169
28. Pīlā - 4.1.118

29. Pīlu - 5.2.24; 6.3.121
30. Pūga - 5.2.51, 5.3.112,
31. Plakṣa - 4.3.164, 8.4.5
32. Bilva - 4.3.136; 151, 6.4.153
33. Bhaṅgā - 5.2.4
34. Māṣa - 5.1.7; 5.2.4
35. Muñja - 3.1.117
36. Mudga - 4.4.25
37. Yava - 4.3.48; 5.1.7, 2,3; 6.2.78
38. Yavaka - 5.2.3
39. Lākṣā - 4.2.2
40. Vaṭa - 5.1.121, 6.2.82, 6.3.27
41. Varaṇa - 4.2.82, 6.3.27
42. Vetasa - 4.2.87
43. Vrīhi - 3.1.148; 4.3.148; 5.2.2, 116; 6.2.38
44. Śami - 4.3.142; 5.3.88, 188, 8.3.96
45. Śara - 4.3.144; 6.3.120; 8.4.5, 49
46. Śāli - 5.2.2
47. Śeṅvala - 5.3.84
48. Śimśapā 7.3.1
49. ṣaṣṭika - 5.1.90, 5.2.3
50. Sidhrakā - 8.4.4
51. Soma - 3.2.90, 4.2.90; 4.4.137, 5.S.125; 6.3.27, 131; 7.2.33
52. Harītakī - 4.3.167.

**Paniniya Ganapatha :**

1. Atasa - 4.1.41 (Gaurādi)
2. Ariṣṭa - 4.2.80 (Kṛśāśvādi)
3. Arka - 4.2.80 (Karnādi), 4.2.90 (Utkarādi)
4. Arjuna - 4.2.80 (Tṛnādi).
5. Arjunapākī - 4.3.167 (Haritakyādi)
6. Arjuna-Śirīṣa - 2.4.11 (Gavāśvādi)
7. Avaka - 7.3.45 (Kṣipakādi)
8. Aśoka - 4.2.80 (Sakhyādi)
9. Aśwattha - 4.2.80 (Kāsādi, Kumudādi), 4.2.90 (Utkarādi), 4.3.67 (Parpādi), 4.3.164 (Plakṣādi), 5.2.24 (Pilwādi), 6.2.85 (Ghoṣādi), 4.1.41 (Gaurādi).
10. Āḍhakī - 4.1.41 (Gaurādi)
11. Āmalaka 4.1.41 (Gaurādi)
12. Ārdravṛkṣa - 4.2.90 (Utkarādi)
13. Iḅṣu - 5.1.50 (Vamśādi), 4.2.9 (Naḍādi, 4.3.136 (Bilwādi)
14. Iṅgudī - 4.3.164 (Plakṣādi)
15. Itkaṭa - 4.2.80 (Prakṣādi, Kumudādi).
16. Indravṛkṣa - 4.2.80 (Sakhyādi), 4.2.90 (Utkarādi).

17. Utpala - 5,2:135 (Puṣkarādi)
18. Udumbara - 2.1.48 (Pātresamitādi), 4.1.99 (Naḍādi), 4.2.53 (Rajānyādi), 4.3.154 (Rajatādi).
19. Uśīra - 2.2.31 (Rājadantādi)
20. Kakṣatu - 4.3.16 (Plakṣādi)
21. Kacchula - 4.2.80 (Kāśādi)
22. Kaṅṭakārī - 4.3.167 (Haritakyādi), 4.3.154 (Rajatādi)
23. Kadali - 4.2.80 (Sakhyādi), 4.3.154 (Rajatādi)
24. Kandala - 5.2.24 (Karnādi)
25. Kapittha - 5.2.135 (Puṣkarādi), 4.2.80 (Kāśādi), 2.4.31 (Ardharcādi)
26. Kamala - 5.2.135 (Puṣkarādi)
27. Karavira - 4.2.80 (Sakhyādi)
28. Karira - 5.2.24 (Pilwadi), 6.2.87 (Kartryādi), 4.3.141 (Palāśādi), 4.2.90 (Madhvādi)
29. Karkandhu - 5.2.24 (Pilwadi), 4.2.90 (Madhvadi), 6.2.87 (Kartryādi), 4.3.186 (Bilvādi).
30. Karpāsa - 2.4.31 (Ardharcādi)
31. Karpāsi - 4.3.136 (Bilvādi)
32. Karpūra - 4.2.80 (Kāśādi), 4.1.123 (Śubhrādi)
33. Kākādani - 4.1.41 (Gaurādi)
34. Kāraskarādi - 6.1.157 (Kāraskarādi)
35. Kāla - 4.3.167 (Haritakyādi)
36. Kāsa - 4.2.80 (Kāśādi), 4.2.90 (Utkarādi)
37. Kiśara - 4.4.53 (Kiśarādi)
38. Kiṃśuluka - 6.8.117 (Kiṃśulukādi)
39. Kuṭaja - 5.1.50 (Vamśādi)
40. Kumuda - 5.2.135 (Puṣkarādi), 3.2.5 (Mūlabibhujādi), 4.2.80 (Kumudādi)
41. Kumbhi - 4.2.95 (Kartryādi), 4.2.80 (Karnādi)
42. Kavala - 5.2.24 (Pilwādi), 4.1.41 (Gaurādi), 6.2.85 (Kartryādi)
43. Kuvalaya - 5.2.24 (Karnādi), 5.2.36 (Tārakādi)
44. Kūṭaśāimali - 6.2.85 (Ghoṣādi)
45. Kaikāṭa - 4.2.80 (Kāśādi)
46. Kairava - 5.2.135 (Puṣkarādi)
47. Kovḍāra - 4.2.90 (Pragadyādi)
48. Koṣātaki - 4.3.167 (Haritakyādi), 4.1.41 (Pippalyādi)
49. Khadira - 4.2.80 (Arihaṇādi, Rśyādi, Varahādi), 5.2.24 (Pilwādi), 4.2.90 4.3.141 (Utkarādi).
50. Kharjūra - 4.1.10 (Aśwādi)
51. Gabhikā - 4.3.167 (Haritakyādi)
52. Gavādani - 4.1.41 (Gaurādi)
53. Gavedhukā - 4.3.136 (Bilvādi)
54. Guggulu - 4.4.53 (kiśarādi)
55. Godhūma - 4.3.136 (Bilwādi)
56. Candana - 2.1.56 (Vyāghrādi)

57. Ciñcā - 4.3.167 (Harīṭakyādi).
58. jambū - 4.2.82 (Varuṇādi), 4.2.83 (Arīhaṇādi), 4.3.165 (Gandhādi).
59. Jīvanta - 4.2.80 (Karnādi)
60. Tagara - 4.4.53 (Kiśarādi)
61. Tamāla - 2.4.31 (Ardharcādi), 4.2.80 (Sakhyādi), 5.2.135 (Puṣkarādi)
62. Tāla - 4.3.153 (Tālādi)
63. Taruṇī - 4.1.41 (Gaurādi)
64. Tarkārī - 4.1.41 (Gaurādi)
65. Tilaka - 5.2.36 (Tarakādi)
66. Tīvrādāru - 4.3.154 (Rajatādi).
67. Tejāna - 4.1.41 (Gaurādi)
68. Trikaṇṭaka - 4.3.154 (Rajatādi).
69. Trivṛt - 6.2.199
70. Darbha - 4.2.80 (Aśmādi), 4.3.144 (Śarādi), 2.4.11 (Gavāśvādi)
71. Dāḍīma - 2.4.31 (Ardharcādi)
72. Dadi - 4.3.167 (Harīṭakyādi)
73. Devadāru - 4.3.154 (Rajatādi)
74. Doḍī - 4.3.167 (Harīṭakyādi)
75. Drākṣā - 8.2.9 (Ayavādī), 6.2.88 (Mālādi), 4.3.167 (Harīṭakyādi).
76. Dhvāṅkṣa - 4.3.167 (Harīṭakyādi)
77. Nakharañjanī - 4.3.167 (-do-)
78. Naḍa - 6.3.117 (Kimśulukādi), 4.2.80 (Kāsādi, Tṛṇādi), 5.2.135 (Puṣkarādi), 4.1.99 (Naḍādi).
79. Nalada - 4.4.53 (Kiśarādi)
80. Nitāntavṛkṣa - 4.2.90 (Utkarādi)
81. Nīpa - 4.3.154 (Rajatādi)
82. Nyagrodha - 4.2.80 (Kumudādi, Rṣyādi, Prekṣādi), 4.3.164 (Plakṣādi), 7.3.53 (Nyaṅkvādi).
83. Padma - 2.4.31 (Ardharcādi), 5.2.135 (Puṣkarādi)
84. Parnī - 4.4.53 (Kiśarādi)
85. Palāśa - 2.1.56 (Vyāghrādi), 4.2.80 (Kāsādi, Varāhādi), 4.2.90 (Utkarādi), 4.3.141 (Palāśādi).
86. Pāṭali - 4.3.138 (Bilvādi)
87. Pāṭhā - 4.2.97 (Nadyādi)
88. Pippali - 4.3.167 (Harīṭakyādi), 4.1.41 (Gaurādi)
89. Pippalimūla - 4.2.90 (Utkarādi)
90. Pitadāru - 4.3.154 (Rajatādi).
91. Pīlu - 6.3.121 (Apilvādi), 5.2.24 (Pīlvādi)
92. Puṇḍarika - 2.1.56 (Vyāghrādi), 5.3.107 (Śarkārādi)
93. Punarbhū - 4.1.104 (Bidādi)
94. Puṣkara - 5.2.135 (Puṣkarādi), 4.1.41 (Gawādi)
95. Pūga - 2.1.59 (Śreṇyādi)
96. Pūtika - 2.4.11 (Gavāśvādi)

97. Plakṣa - 4.2.91 (Nadādi), 4.3.164 (Plakṣādi)
98. Bakulā - 5.2.36 (Tārakādi)
99. Badara - 5.2.24 (Pīlwadi), 4.1.41 (Gaurādi)
100. Badari - 4.1.99 (Nadādi), 6.2.85 (Ghoṣādi)
101. Balwaja - 4.2.80 (Kumudādi), 4.3.144 (Śarādi), 5.1.50 (Bilwādi)
102. Bibhitaka - 4.3.154 (Rajatādi).
103. Bimba - 2.4.31 (Ardharcādi), 4.1.41 (Gaurādi)
104. Bilwa - 4.2.53 (Rajanyādi), 4.2.80 (Arīhanādi), 4.3.136 (Bilwādi).
105. Bījapūra - 4.2.80 (Sakhyādi)
106. Bṛhatī - 4.3.164 (Plakṣādi)
107. Bhalatṛ - 4.2.80 (Arīhanādi)
108. Bhārṅgi - 4.2.116 (Kāśyādi)
109. Mandāra - 4.2.80 (Pragadyādi)
110. Masūra - 4.3.136 (Bilwādi)
111. Mālatī - 4.1.41 (Gaurādi)
112. Māṣa - 2.4.31 (Ardharcādi)
113. Muñja - 4.1.99 (Nadādi)
114. Mudga - 4.3.116 (Bilwādi)
115. Mūlaka - 2.4.31. (Ardharcādi)
116. Methī - 4.1.41 (Gaurādi)
117. Yava - 8.2.9 (Ayavādi)
118. Yavāsa - 4.2.80 (Kumudādi), 4.3.141 (Palāśādi), 5.2.135 (Puṣkarādi)
119. Yūthī - 4.1.41 (Gaurādi)
120. Rajanī - 4.1.41 (Gaurādi)
121. Ruru - 4.3.164 (Plakṣādi)
122. Ruhinī - 4.1.123 (Śubhrādi)
123. Reṇu - 2.4.31 (Ardharcādi)
124. Rohinī - 4.1.123 (Śubhrādi)
125. Rohitaka - 4.3.154 (Rajatādi)
126. Lakuca - 4.2.80 (Balādi)
127. Vaṭa - 4.2.80 (Balādi)
128. Vamśa - 5.1.50 (Vamśādi), 3.3.120 (Śarādi)
129. Varaṇa - 4.2.82 (Varuṇādi)
130. Varī - 4.1.41 (Pippalyādi)
131. Vikantaka - 4.2.80 (Kumudādi), 4.3.131 (Palāśādi)
132. Viḍaṅga - 2.4.31 (Ardharcādi)
133. Vīraṇa - 4.2.80 (Rṣyādi, Arīhanādi)
134. Veṇu - 4.2.80 (Rṣyādi), 4.2.90 (Madhwādi), 4.3.136 (Bilwādi)
135. Vetasa - 4.1.41 (Gawādi)
136. Vetta - 4.2.90 (Utkarādi)
137. Vrīhi - 4.3.136 (Bilwādi), 5.2.116 (Vrīhyādi)
138. Śamī - 4.1.41 (Pippalyādi), 4.2.90 (Madhwādi), 5.2.24 (Pīlwādi), 6.2.87 (Kartṛyādi)



1. While elaborating the Sutra 5.29 (संप्रदोश्च कटच्) he has informed that the suffix 'Kaṭac' will also be used in the sense of Rajas (powder) after the words Alābu, Tila, Umā and Bhaṅgā. Explicit mention of Bhaṅgā (Indian Hemp) is seen for first time here. With the association of Umā (Linseed), it is known that Bhaṅgā plant was used for its strong fibres.

2. Panini has proposed many Sutras for prescribed suitable suffix after the plant names denoting their fruits. While expanding the idea of the Sutra 4.3.166 (लुप्च्), Katyayana extends this provision to the plant, which dry up after their fruits ripen (फलपाकशुषामुपसंख्यानम्) also to the flowering and tuberous plants (पुष्पमूलेषु बहुलम्).

3. Panini has prescribed 'Natva' in the word 'Vana' after plant names (8.4.6) but Katyayana has disallowed it in cases of plant names having more than three vowels and also in particular cases like Irikā and Mirikā.

4. Panini has prescribed the form 'Nili' in cases except clothing while Katyayana has extended it clearly to plant as well as animal.

5. Katyayana has extended the use of suffix उङ् in the case of Guggulu as well (4.1.71).

6. In the context of feminine suffix डीष् (4.1.49), Katyayana rules that the word 'Yavāni' be used for diseased Yava (दृष्टो यवो यवानी). It may be noted that in medicine the word 'Yavāni' is used for a particular drug. It is surprising that he is not acquainted with it or he might be meaning the same because of it being impure grain (due to its probable connection with Yavanas)

7. Similarly in the context of feminine the suffix टाप् (4.1.4). He prescribes it particularly in the words followed by फल and पुष्प such as Bhastraphalā, Pratyak-puṣpā etc.

8. Though the word तैल is literally meant the oil derived from Tila but Katyayana generalises it for oil derived from other substances as well as making तैलच् as only a suffix (स्नेहे तैलच् 5.2.29).

9. Katyayana prescribes specific suffixes for the articles dyed with Nīlī, Haridrā and Mahārajana.

10. He prescribes plural number in case of the fruits of Harītakī (हरोत्क्यादिषु व्यक्ति-; -1,2.52

11. In the context of import of substances from the northern region (5.1.77) he details it by mentioning various routes such as water, forest, land etc.



**Katyayana's Vartika :**

The following plants are particularly seen in the Vārtika

1. Alābu-5.2.29
2. Irikā - 8 4,6
3. Karkandhu - 1,1.64
4. Guggulu - 4.1.59, 71
5. Tāla - 4.3.152
6. Tīla - 4.3.26; 5.2.29; 6,8,67.
7. Nīlī - 4.1.42; 4.2.2
8. Pippalī - 4.1.41
9. Prāyaścitti - 6.1.157
10. Bhaṅgā - 5.2.29
11. Bhastraphalā - 4.1.41

The words 'Ajinaphalā', Piṇḍaphalā and Śaṇaphalā are also here :

12. Mahārajana - 4.2.2
13. Mirikā - 8.4.6
14. Yava - 4.1.49
15. Veṇuka - 4.2.138
16. Vrīhi - 3.2.24
17. Śaṇa - 5.2.29
18. Śara - 4.1.55
19. Śatapušpā- 4.1 4

The words Kāṇḍapuṣpā, Prāntapuṣpā, Śatapušpā, Prākpuṣpā, and Ekapušpā are also here:

20. Sarṣapa - 5.2.29
21. Haridrā - 4.2.2
22. Harītakī - 1 2.52

**Patanjali :**

Patanjali is the last of the triad of Sages (मुनित्रय) in the field of Samskrit grammar. His date is fixed in the 2nd Cent. B. C. during the reign of Puyamitra of the Sunga Dynasty. His importance is evident from the fact that he is regarded as incarnation of Śeṣaṇāga and is identified as the author of Yogasutra as well as Caraka Saṃhitā besides the Mahabhāṣyā.

In Mahabhāṣya we find many valuable informations regarding plants. He has not only described the characters of plants (see खदिर, न्यग्रोघ) but has also given information about the trade route of Plant products - For instance, he says that Madhuka (Glycyrrhiza roots) and Marica were imported by land route (स्थलपथा दाहृतं स्थालपथं मधुकं, स्थालपथं मरिचम्)

**Patanjali's Mahabhasya :**

The following drugs are found in Patanjali's Mahabhasya on Panini's sutras

1. Akṣa - 1.2.64, 1.3.1.
2. Arka - 1.1.2; 57
3. Alābu - 4.1.66, 287; 5.2.29, 876; 6.3.61, 164;
4. Aśoka - 7.3.46
5. Aśvāttha - 1.1.2 - Its dry twigs were used as sacrificial fuel.
6. Asiknī - 4.1.39, 216
7. Āṇḍīra - 3.1.30, 85
8. Āmalaka - 1.1.57-58, 4.8.163; 5.1.119
9. Āmra - 1.1.1; 1.2.45; 4.8.155, 6.1.91
10. Ikṣu - 4.2.71; 5.2.29
11. Inguda - 5.2.29-Oil has been mentioned along with that of Sarṣapa.
12. Irikā - 8.4.6
13. Utpala - 1.1.21, 71-Girls used to bear its garlands and the flowers were offered as presents.
14. Udumbara - 1.1.1; 3.1.87; 4.2.71; 6.3.111
15. Umā - 5.2.24.

It has been discussed whether Umā (Linseed) and Bhaṅgā (Hemp) may be included under cereals. (घान्य) One opinion is that only those are cereals which are read in the related context (Known as Came) in Yajur Veda (such as यवाश्चमे माषाश्च मे etc). As these are not mentioned in the list, they cannot be taken as cereals. Others opine cereal (Dhānya) is that which is consumed and as these two are as well consumed by men they are also cereals. Moreover, 17 cereals have been mentioned including śaṇa (शणसप्तदशानि धान्यानि) and as Umā and Bhaṅgā are types of śaṇa (fibrous plants) they are also cereals. It clearly denotes that these two plants were used for their fibres as well.

16. Kakṣatu - 4.2.71, 104
17. Kaṭuka - 2.1.1, 360, 363
18. Kadali - 1.1.2
19. Kadrićī - 6.3.93
20. Kapittha - 4.3.154 - Juice of Kapittha (कपित्थो रसः)
21. Karavīra - 4.3.166 - Flowers of Karavīra alongwith those of Mallikā.
22. Karkandhu - 4.1.66; 6.3.61 - The fruits of Alābu, Karkandhu and Dṛṇbhu are read together.
23. Kaśeru - 5.1.12
24. Kāṇḍapuṣpā - 4.1.65
25. Kāṇḍīra - 1.1.5
26. Kāraskara - 6.1.157 - Denotes a tree (कारस्करी वृक्षः)
27. Kārabhū - 6.4.84

28. Kārpāsa - 6.1.80; 7.2.44 Swabs were made of cotton (पिचव्यः कापसिः)  
 29. Kālaka - 6.3.109 - Forests of Kālaka in Prayāga.  
 30. Kāśa - 1.1.14; 3.1.91 Mats were made of Kāśa (इच्छाम्यहं काशकटोकारम्)  
 31. Kimśuka - 3.1.79 - Flowers of Palāśa are natural red (दैवव्रतः किंशुकाः)  
 32. Kumuda - 1.4.1; 3.2.5 - Growing in ponds (सरसीहहं कुमुदम्)  
 33. Kuvala - 4.3.139, 155.  
 34. Kuśa - 1.1.14  
 35. Kovidāra - 1.2.45  
 36. Koṣātakī - 2.23, 408, 5.3.62, 423.  
 37. Khadira - 1.1.1. 45; 2.1.1, 5.1.2, 13; 3.3.17

An important tree used as sacrificial pot and fuel. The ear-rings have been simulated with the cokes of Khadira wood (खदिरांगारसवर्णं कुण्डले भवतः). Khadira has been distinguished from Burbura which has also got similar whitish stems and small leaves on account of having flakes in the bark (खदिरवृक्षुरी गौरकाण्डो सूक्ष्मपर्णी, ततः पञ्चादाह-कंकटवान् खदिर इति, तेनासौ विशेषेण द्रव्यान्तरं समुदायं प्रतिपद्यते) Heartwood of Khadira (खदिरसार) is used.

38. Garmut - 1.1.72  
 39. Gavīdhikā - 4.3.135  
 40. Guggulu - 4.1.71  
 41. Ghṛtācī - 6.3.95  
 42. Candana - 4.2.65 Fragrant wood (चान्दनगन्धिक.)  
 43. Campaka - 2.1:1 Fragrant Fowers.  
 44. Jatu - 1.1.46; 4.1.71; 6.1.85, 91  
 45. Jambū - 4.1.114; 2.4.7, 8  
 46. Tittidīka - 4.3.155  
 47. Timira - 8.4.6  
 48. Tila - 1.1.5, 49; 1.3.11; 1.4.2; 2.1.58; 3.2.5, 28; 3.3.19; 4.2.86; 4.3.166; 5.1.20, 94; 5.2.4, 29.

The black variety (कृष्णतिल) was more popular. Tila oil was very common. Sweet balls (Modaka) were prepared from fried Tila mixed with Jaggery. Oil was extracted in a machine (Tilapīdanī). The paste of Tila was smeared on the inner sole of shoes to make them soft (उपानदर्थंस्तिलकल्कः)

49. Tumburu - 1.1.46; 7.2.101.  
 50. Tejana - 6.1.83

It was used as arrow (शरव्यो वै तेजनम्)

51. Trapusa - 1.1.59; 6.1.32 - 38

Taking curd and cucumber together was one of the causes of fever (दधिन्नपुषंप्रत्य क्षोज्वरः)

52. Triphalā - 4.1.64; 6.4.121.

A combination of three fruits (त्रयाणां फलानां समाहार इति द्विगुःप्रदीपव्याख्या)

53. Dāḍima - 1.1.1; 1.2.45  
 54. Dūrvā - 1.4.80; 3.2.126  
 It grows while creeping on ground (शयाना दृष्टेते दूर्वा) and also with the hairs from cows and sheep (गोलोमाविलोमभ्यो दूर्वा जायते)  
 55. Dṛnbhu - 6.3.61; 6.4.48  
 The fruits of Dṛnbhu (a type of cucumber).  
 56. Devadāru - 8.4.6  
 57. Drākṣā - 5.3.67  
 The fruits sweet like Jaggery (गुडकल्पा द्राक्षा)  
 58. Nada - 1.1.59; 2.3.69; 3.2.127; 4.1.96; 6.1.32-38  
 The blowing pipes were made from it. योहि नडोनाम नाडिस्तस्यमवति The marshy land where this plant occurs was called Nadvala the water of which caused diseases of feet. (नड्वलोदकं पादरोगः)  
 59. Niṣpāva - 1.3.10; 3.3.20  
 60. Nīpa - 4.1.170; 6.1.91  
 61. Nīlī - 4.1.42; 4.2.1  
 A plant used for dyeing (नीलो औषधिः, नील्या रक्तं नीलम्)  
 62. Nyagrodha - 1.1.55. 71; 1.4.9; 5.3.72; 7.3.1  
 A latex - bearing plant having broader leaves and prop roots (येशोरिणोऽवरोहन्तः पृथुपर्णास्ते न्यग्रोधाः, न्यग्रोहतोति न्यग्रोधः). The seed like fruits were called Vātaṅṅikā' शुक्लोनीलः कृष्णइति हिमवत्यपिभवति, वटकणिका मात्रेऽपि द्रव्ये)  
 63. Panasa - 1.1.7  
 64. Palāṅḍu - 3.2.86; 5.3.66  
 Sudras used to take it with wine (बृषलरूपोऽयं, अप्ययं पलाण्डुना सुरां पिबेत्)  
 65. Palāśa - 1.1.1; 2.2.8; 3.3.126; 4.1.3; 4.1.3; 4.3.154; 6.2.52.  
 66. Piṅḍaphalā - 4.1.64  
 67. Pippalikā, Pippali - 1.1.2; 1.2.44, 72; 2.2.2-3, 408; 5.3.72, 423, 1, 2, 216, 251; 2.4.26 478, 479.  
 68. Pīlu - 6.3.121, 176  
 69. Punarbhū - 6.4.84  
 70. Puṣkara - 7.2.116  
 71. Pūtīka (tree) 1-1-55; 3.2.110  
 Also One of the aromatic grasses used in sacrificial beverage and also for matting. (पूतिकतृणानि अभिषुणुयात्, शयिष्यामहे पूतिकतृणेषु)  
 72. Priyāṅgu - 4.2.62  
 An anecdote relating te Priyāṅgu (प्रीयंगविकः अध्यायः)  
 73. Plakṣa - 1.1.2, 3, 12; 2.1.1; 4.1.78, 95; 5.2.115; 5.3.55, 72; 6.1.25, 85.  
 74. Badara - 1.1.58, 1.2.30, 51, 52; 1.4.109; 2.2.5; 4.3.139; 5.1.119.  
 A plant having small thorns and sweet fruits. (बदरो सूक्ष्मकण्टको मधुरो वृक्षः)  
 75. Balwaja - 1.2.45  
 Rope is made of its fibers(एकश्च बल्वजो बन्धने ऽसमर्थः तत्समुदायश्च रज्जुः समर्था भवति)  
 76. Bimba - 1.1.58; 6.1.94 - Red Fruits of Bimbā.

77. Bilwa - 3.1.1; 4.2.52; 4.8.135, 142; 6.4.153.  
 78. Burbura - 1.1.45 - Plant similar to Khadira.  
 79. Bṛhatī - 6.1.173  
 80. Bibhītaka - 5.1.2, 18

Sacrificial post made of Bibhītaks (बैभितको यूपः)

81. Brāhmī - 6.4.171 - A Herb (ब्राह्मी औषधिः)  
 82. Bhaṅgā - 5.2.4  
 See Umā.

83. Madhuka - 5.1.77

It was brought by land route from a distant place (स्थलपथं मधुकम्) The commentator says that as because of distance it was not possible to go there and as such the suffix is intended for transport only (अत्र मुख्यगमनासंभवादाहृत एवप्रत्ययमिच्छन्ति-प्रदीप)

84. Marica - 5.1.77

The same as in Madhuka. It was also brought by land route from distant place.

85. Mallikā - 4.3.166

One of the flowers.

86. Mahārajana - 4.2.1

A common source of dyeing material. see Haridrā

87. Māṣa - 1.1.61; 1.4.27; 2.2.6; 3.1.96; 3.2.28; 4.3.166; 5.1.20, 37; 6.1.13; 6.2.108, 138.

The plant dries up after their fruits ripen (फलपाकशुषाम्). The Cereal when taken in increases gas formation in the abdomen (शर्धजहाः माषाः) The other plants in this category are - व्रीहि, यव, मुद्ग एवं तिल)

88. Muñja - 1.1.71; 4.2.124

It has got cotton like flowers on the stick like peduncle (मुंजेषोकतूल)

89. Mudga - 4.3.154; 5.1.37 90.

The crop is ready in sixty nights (मुद्गा अपि षष्टिरात्रेण पच्यते) The seeds are used as pulse which is eaten with rice (शालीन् भुङ्क्ते मुद्गैः) It was also used as exchange-medium for purchasing other articles (मुद्गैः क्रीतं मौद्गिकम्)

90. Mūlaka - 4.6.48

It was used as salad (मूलकेनोपदंशं भुङ्क्ते)

91. यव 1.1.7.56, 61. 1.4.51; 2.1.17; 4.1.6, 25. 49; 4.3.25; 5.2.4, 47; 5.4.36; 6.1.13; 6.3.34; 6.2.108, 133

It was a common staple food. It was abundant in Usinara and Madra regions. The bullocks also ate it. There was always danger to those fields by wild deer.

(न च मृगाः सन्तीति यवा नोप्यन्ते)

92. Yavaka - 4.1.25, 212; 5.2.4; 6.2.117, 184

98. Yavāsa - 5.4.35, 435

94. Rājamāṣa - 5.1.20.

95. Lākṣā - 4.2.2. see जतु

96. Vaṁsa-Veṇu - 1.1.2, 14; 6.1.208.

The gregarious group of those plants is called वंशस्तम्ब (महतौ वंशस्तम्बात्... अनुकृष्यते)

97. Vandana - 3.3.107
98. Varsābhū - 6.4.84  
Growing in rainy season (वर्षामु भवति, वर्षा वा भवते प्राप्नोतीति वर्षाभूरोषधिविशेषः—प्रदीप)
99. Vetasa - 1.1.57
100. Vrihi - 3.2.24; 5.2.94; 6.1.66; 1.2.58, 212.
101. Śaṇa 4.1.64; 5.2.4  
See Umā
102. Satpuṣpā - 4.1.64
103. Śamī - 4 1.92; 5.3.88; 6.1.107; 7.3.95
104. Sara - 4.1.55; 6.1.83
105. Śāka - 4.3.155
106. Śāla - 1.1.1; 3.3.17; 6.6.91  
Its heartwood was very strong (बले शालसारः)
107. Śāli - 1.1.1.22; 1.2.39; 1.3.39; 2.1.1., 68; 3.3.133; 3.4.21; 4.1.25, 212; 5.4.50; 6.1.50.  
It was a common food article (शालीनां ते ओदनं ददामि)  
There was arrangement of irrigating the fields but still they depend on clouds (शाल्यर्थं कुल्याः प्रणीयन्ते, देवश्चेद्वृष्टो निष्पन्नाःशालयः) It had also a red variety लोहितशालिमान् ग्रामः
108. Śimśapā - 5.1.2; 7.3.1  
The axle of carts was made of its wood (नम्या शिंशपा)
109. Śirīṣa - 3.1.7; 1.2.51
110. Śīrya - 2.2.34; 2.4.12
111. Śīṅgavera - 2.1.1, 35  
It was a pungent substance (कटुकं शृंगवेरम्).
112. Śephālikā - 5.3.55  
A type of washing of cloths was known as saiphalika on the simile of the flowers (द्यौतकं शं फालिकादयः प्रक्षालनवैजात्यकृताः बस्त्रस्य गुणविशेषाः—उद्योत)
113. Saptaparna - 2.2.1, 439; 8 1.1, 362
114. Sarala - 3.1.96
115. Sarasīruha - 3.2.5 - see कुमुद
116. Sarvabīja - 2.1.68  
A group of seeds.
117. Sarṣapa - 1.1.2; 5.2.29; 5.3.55  
Its oil was common (see इंगुदी)  
Ingudi oil was common in hermitages while sarṣapa oil was used in household.
118. Siddhakāṇḍa - 6.1.68; 7.4.61; 8.2.68
119. Suparṇī - 4.1.1.4
120. Subhagaṅkarāṇī - 4.1.15
121. Suvarcalā 3.1.7  
It rotates according to the movement of the sun (सुवर्चला आदित्यमनु पर्य्यति)

122. Soma - 1.1.3; 1.4.2; 8.1.94 3.2.127; 3.3.15, 113; 6.191  
It was used in sacrifices.
123. Haridrā - 421  
It was used as dye.
124. Haritaki - 1.2.52  
Its fruits were used (हरोतक्याः फलानि हरीतक्यः)

### SUMMARY

The paper through information available in the grammatical works of Panini, Katyayana and Patanjali acquaints the reader with the drugs prevalent during the periods and provides an historical outlook to the subject of drug lore through non medical sources; clues relating to identification of the drugs mentioned herein may be of assistance in correct appraisal of the drugs mentioned in classical Ayurvedic treatises in the event any controversy arises.

The works of this triad in the field of grammar occupy a place identical to that of briddhatrayi in Ayurveda. In view of decisiveness or at least agreement on their dates, information on drug lore available in these works affords a historical dimension of interest and importance to Ayurvedic drug studies.

सारांश

मुनित्रय-प्रणीत व्याकरणग्रन्थों में औद्धिज्जों का उल्लेख ।

ले० प्रियव्रत शर्मा

इस लेख के द्वारा पाठकों को पाणिनि, कात्यायन और पतञ्जलि के ग्रन्थों में जिन औद्धिज्जों का उल्लेख हुआ है उनका परिचय देते हुए यह बताया गया है, कि उस समय इन्हींका औषध हेतु प्रचार रहा होगा; जिससे, एक अवैद्यकीय-स्रोत के द्वारा निघण्टुशास्त्र के संबंध में जो ऐतिहासिक-दृष्टि मिलती है उसकी सहायता लेकर यदि कदाचित् आयुर्वेदिक-संहिताओं में इन्हीं द्रव्यों के विषय में सन्देह उत्पन्न हो तो, उन द्रव्यों की परीक्षाकरके विशुद्धता का परिचय प्राप्त किया जा सकता है ।

व्याकरण-क्षेत्र में, मुनित्रय-प्रणीत-व्याकरण-ग्रन्थों का वही स्थान है जो आयुर्वेद में बृद्धत्रय-संहिताओं का है। इन ग्रन्थों के कालनिर्णायक पक्षों अथवा कमसे कम तत्सम्बन्धी मान्यताओं को दृष्टि में रखते हुए निघण्टु विषयक जो संकेत प्राप्त होते हैं, उनसे आयुर्वेदिक निघण्टु-शास्त्रीय अध्ययन में एक महत्त्वपूर्ण एवं, सर्वप्रिय ऐतिहासिक भूमिका प्राप्त होती है ।