

Contributions of Professor K.S.Thind to the development of Mycology in India

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I feel deeply honoured to have been asked to write about the contributions of a doyen of Indian mycology Professor Kartar Singh Thind, popularly known as K.S.Thind, for publication in special volume of KAVAKA being dedicated to him in his birth centenary year (2017). I have had an opportunity to know him as a student while pursuing my doctorate at Department of Botany, Panjab University, Chandigarh and then as my senior colleague, although I was not his direct student but I am one of the fortunate ones to have taken my initial lessons in mycology and plant pathology from two of his illustrious students, Late Professor S.S.Saini, being M.Sc. student at Punjabi University, Patiala and then from Late Professor G.S.Rawla at Panjab University, Chandigarh under whose guidance I earned my doctorate. I have no hesitation in taking this pride to inherit the legacy of hard work and dedication from this legendary mycologist and carry it forward at a place where Professor Thind established a school of mycology in his own right and attracted the attention of National and International mycologists of repute including Professor T.S.Sadasivan, Professor C.V.Subramanian, Professor E.J.H.Corner, Professor R.P.Korf and many others listed in the ongoing account. On my own behalf and on behalf of mycological fraternity, I appreciate the effort of Mycological Society of India for remembering the contributions of Professor K.S.Thind by bringing out a dedicated issue of KAVAKA on his birth centenary which falls on 30th October, 2017.

EARLY LIFE AND EDUCATION

Kartar Singh Thind; born on October 30th, 1917 in Saidpur (District Kapurthala, Punjab); was the fifth of the seven children of late S. Bhag Singh. He passed his high school in first division from Parmjit High School, Sultanpur Lodhi. Later on he shifted to Khalsa College Amritsar and graduated with B. Sc. (Hons. School), standing first class first in 1939, for which he was awarded "Oman Prize". He later on joined Department of Botany, Panjab University, Lahore for his Master's Degree and worked under the guidance of Late Prof. H. Chaudhari, the then Head, Department of Botany. He carried out research on the different aspects of Plant Diseases for his Master's Degree. He topped the list of successful candidates and was awarded Alfred Patiala Research Fellowship by the Punjab University, Lahore from 1942-1945. He then moved to University of Wisconsin, Madison, USA to work under the guidance of renowned Plant Pathologist Dr. G. W. Keitt for his Doctoral Degree on Government of India Overseas Scholarship.

PROFESSIONAL CAREER

Soon after returning from U.S.A, he joined as Regional Potato Development officer, Himachal Pradesh for a brief period in 1949. He was invited to join the newly setup Department of Botany, Panjab University located at Khalsa college Amritsar in the year 1949. Soon after joining the Department of Botany, he came in contact with the eminent mycologist Prof. E. J. H. Corner FRS at the University of Cambridge, U.K., in 1950's. Prof. Corner's inspiration and his own intellect and zeal to work hard initiated the task of floristically exploring the Himalayan Fungal flora for higher fungi, which he continued



**Professor K.S. Thind
(30-10-1917 to 03-12-1991)**

till his last breath. Thus the tradition of floristic studies in Bryophytes started by Late Prof. S. R. Kashyap and Prof. H. Chaudhari in aquatic fungi in the Department of Botany, Panjab University, Lahore were continued by Dr. K. S. Thind. He became Reader in 1957 and was appointed as Professor of Botany (Mycology and Plant Pathology) in 1962. Along with his elevation as a Professor, his devotion towards floristics of Himalayan fungi and understanding of the fungal Systematics, made him an eminent mycologist of the Sub-continent and an internationally recognized figure of systematic mycology. Professor Thind devoted his whole life to nurture Indian Mycology, for which he worked relentlessly along with a team of his dedicated scholars till he breathed his last on 3rd December, 1991.

PERSUIT OF MYCOLOGICAL RESEARCH

Prof. Thind along with his team of devoted students explored the North-Western Himalayas from 1952-1976 and Eastern Himalayas and Assam Hills in the jurisdiction of Indian Republic as well as the Royal Kingdom of Bhutan from 1977-1986 for the collection of higher fungi and slime moulds. The floristic studies pertained to *Myxomycota*, *Ascomycota* (*Xylariaceae*, *Pezizales* and *Helotiales*) and *Agaricomycetes* (non-gilled fungi). For all such explorations, he received

grants from PL-480 and the Department of Science and Technology, New Delhi. The floristic explorations conducted during this period (1952-1986) lead to the discovery of around 400 taxa new to science, which also included new genera in almost all the groups of fungi he investigated. Prof. Thind was probably the first mycologist in the country to demonstrate the importance of application and concepts of tissue types in the taxonomy of *Discomycetes* and *Aphylophorales* as put forth by Prof. Korf and Prof. Corner, respectively. The same was also applied in the *Xylariaceae* and *Gasteromycetes* in which this concept was never applied.

Prof. Thind's excellence in fungal systematics did not stop him in venturing into the world of Fungal Physiology. His refinement of the method of removal of trace element contaminants in the study of nutritional requirements of plant pathogenic fungi is a testimony of his multifacet academic excellence in different fields of studies concerning fungi.

RESEARCH COLLABORATION

Prof. Thind interacted and collaborated with eminent mycologists of the country which included T.S. Sadasivan, C.V. Subramanian, S.N. Dasgupta, R.S. Vasudeva, B.L. Chona, R.N. Tandon, K.S. Bhargava, R.S. Mehrotra, to name only a few. Similarly he was in close contact for interaction and collaboration at the international level with notable mycologists like: G.W. Martin, E.J.H. Corner, J.A. Nannfeldt, Miss. E.K. Cash, R.P. Korf, D.A. Reid, G.H. Cunningham, R.W.G. Dennis, Madam M. Le Gal, M.A. Donk, E.G. Mulder, V.G. Lilly, Mrs. N.E. Nannenga-Bremekamp, R.A.G. Mass, A. Raithir and E. Parmasto.

RECOGNITION AND HONOURS

Prof. Thind made several visits abroad in pursuit of his academic interests: Government of India Overseas scholarship scheme for advanced studies in Plant Pathology, 1945-48; Fulbright Fellow with Smith Mundt Award. U. S. A. 1960-61; visited Universities and Research institutes in various European countries, 1961; visited various Universities/Institutes in Bulgaria, 1974 under Indo-Bulgaria Cultural Exchange Programme; U.G.C. delegate to the second International Mycological Congress in Tampa, Florida, U. S. A., 1977. Official, national and international recognitions, had come to him such as: Member, sigma XI, U. S. A., 1948; elected fellow of the National Academy of Sciences, 1958; Fellow, Indian Academy of Sciences 1960; Fellow, Indian National Science Academy, 1968; Member of the International Mycological Association for 4 years (1972-76) and later from 1977-1983. At the National level, he was elected: President, Indian Phytopathological Society, 1972; President, Section of Biological Sciences, National Academy of Sciences, 1973; President Indian Botanical Society, 1973; President, Section of Botany, Indian Science Congress Association, 1975; President Mycological Association of India, 1979; Chairman, Committee for the development of Asiatic Mycology, 1977-83; Honorary Fellow, Indian Mycological Society, 1979; Awarded Panchanan Maheshwari Gold Medal, Indian Botanical Society, 1979; National Lecturer, U.G.C. 1982; Awarded T.S. Sadasivan Endowment Lectures INSA award, 1982; participated and chaired sessions at National and International symposia.

RESEARCH GUIDANCE AND PUBLICATIONS

Prof. Thind published 186 research papers in journals of National and International repute. His work has been cited in review papers, books and monographs. Prof. Thind was the first Indian mycologist to publish comprehensive monographs on *Myxomycetes* and *Clavariaceae* of India. He guided 23 Ph.D students besides guiding very large number of M.Sc. students who occupy/occupied eminent positions nationally as well as internationally. Long list of his Ph.D. students who worked on varied groups of fungi including their nutritional and physiological aspects and the publications generated there off given below stands testimony to the contributions made by Professor K.S.Thind to the establishment and growth of Mycology in India.

I-Names of Ph.D. Scholars guided and titles of their thesis

1. Gurdeep Singh Rawla. 1962. "Studies on the nutrition of fungi".
2. Chuni Lal Mandahar. 1963. "Nutritional studies of some pathogenic fungi".
3. Satnam Singh Saini. 1967. "Studies on the trace elements nutrition of some important pathogenic fungi".
4. Sarjit Singh Rattan. 1969. "Studies on the Thelephoraceae of India".
5. Harnek Singh Garcha. 1969. "Studies on the Helotiales of India".
6. Karnail Singh Waraitch. 1969. "Studies on Indian Operculate Discomycetes".
7. Harmander Khara. 1969. "Studies on the Hydnaceae of India".
8. Kuldeep Kaur. 1971. "Nutritional studies of some fungi".
9. Mira Madan. 1972. "Studies on the nutrition of some pathogenic fungi".
10. Sukhwant Singh Dhillon. 1976. "Studies on the Myxomycetes of North- Western Himalayas".
11. Joginder Singh Dargan. 1976. "Studies on the Xylariaceae of North- Western Himalayas".
12. Subhash Chander Kaushal. 1976. "Studies on the Operculate Discomycetes of North- Western Himalayas".
13. Mohinder Pal Sharma. 1976. "Studies on the Inoperculate Discomycetes of North- Western Himalayas".
14. Ranjit Singh Dhanda. 1976. "Studies on the Polyporoid fungi of North- Western Himalayas".
15. Inder Pal Singh Khurana. 1977. "Studies on Clavarioid fungi of India".
16. Inder Pal Singh Thind. 1977. "Studies on Gasteromycetes of North- Western Himalayas".
17. Rishi Kaushal. 1982. "Studies on Operculate Discomycetes of Eastern Himalayas and adjoining

- hills".
18. Brij Mohan Sharma. 1982. "Studies on the Gasteromycetes of Eastern Himalayas and adjoining hills".
 19. Gurpaul Singh Dhingra. 1983. "Studies on the Thelephoroid fungi of Eastern Himalayas and adjoining hills".
 20. Ram Murti Sharda. 1983. "Studies on the Clavarioid fungi of Eastern Himalayas and adjoining hills".
 21. Raghunandan Sharma. 1984. "Studies on the Helotiales of Eastern Himalayas and adjoining hills".
 22. Rajesh Sharma. 1986. "Studies on the Myxomycetes of Eastern Himalayas and adjoining hills".
 23. Suninder Singh Virdi. 1987. "Studies on the Polyporoid fungi of Eastern Himalayas and adjoining hills".

II-Monographs published

1. **Thind, K.S.** Indian *Clavariaceae*, 1961. Indian Council of Agricultural Research, New Delhi.
2. **Thind, K.S.** *Myxomycetes of India*, 1977. Indian Council of Agricultural Research, New Delhi.

III-Presidential addresses and special lectures delivered

1. The myxomycetes in India (42nd Annual Session, Biol. Sci. Sect. Allahabad) Proc. Nat. Acad. Sci. India (Annual Number) 77: 47-64, 1973.
2. Aphyllophorales in India (25th Annual General Meeting, I.P.S., Chandigarh) Ind. Phytopath. 26: 2-23, 1973.
3. The discomycetes in India (53rd Annual General Meeting, I.B.S., Nagpur), Ind. I. bot. Soc. 53: 1-19, 1974.
4. Fungi- the versatile organisms. (63rd I.S.C.A., Botany Section, Waltaire) Proc. 63rd, Ind. Sci. Cong. p. II: 35-58.
5. Sporocarp anatomy in higher fungi: Ascomycotina (IIInd. Botanical Conference). Indian, Botanical Society, Bhagalpur, 1979.
6. Basidiocarp anatomy and its importance on the systematics of aphyllophorals. (7th Annual meeting Myc. Soc. Ind., Jaipur), Kavaka 8: 1-16, 1980.
7. Tissue Concepts in fungi, (Prof. T.S. Sadasivam Endowment Lecture, I.N.S.A.) Proc. Ind. Nat. Sci. Acad. 49B

IV-List of publications

1. **Thind, K.S.** 1942. *Puccinia phyllocladiae* Cooke, a new record in India. *J. Indian bot. Soc.* **21**: 195-196.
2. **Thind, K.S.** 1942. The genus *Peronospora* in the Punjab. *J. Indian bot. Soc.* **21** (3-4): 197-215.
3. **Thind, K.S.** 1944. A note on the life history and systematic position of *Rhinosporidium seeberi*

4. Wenicke. *J. Indian bot. Soc.* **24**: 4-9.
5. **Thind, K.S.** 1949. Studies on the variability of *Sclerotinia fructicola* (Wint.) Rehm. *Phytopath.* **39**: 621-636.
6. **Thind, K.S.** 1950. Studies on the variability and nutrition of *Sclerotinia fructicola* (Wint.) Rehm. *Summaries of Doctoral Dissertations Univ-Wisconsin*, **10**: 221-223.
7. **Thind, K.S.** and Sohi, H.S. 1955. The Myxomycetes of the Mussoorie hills. I. *Indian Phytopath.* **8** (2): 150-159.
8. **Thind, K.S.** and Sohi, H.S. 1956. The myxomycetes of the Mussoorie hills. II. *Indian Phytopath.* **9** (1): 1-8.
9. **Thind, K.S.** and Sohi, H.S. 1956. The myxomycetes of the Mussoorie hills. III. *Indian Phytopath.* **9** (2): 88-97.
10. **Thind, K.S.** and Sohi, H.S. 1956. The myxomycetes of the Mussoorie hills. V. *Indian Phytopath.* **9** (2): 158-168.
11. Corner, E.J.H., **Thind, K.S.** and Anand, G.P.S. 1956. The Clavariaceae of the Mussoorie Hills-II. *Trans. Brit. mycol. Soc.* **39**: 475-484.
12. **Thind, K.S.** and Anand, G.P.S. 1956. The Clavariaceae of the Mussoorie hills. III. *J. Indian bot. Soc.* **35** (2): 171-180.
13. **Thind, K.S.** and Anand, G.P.S. 1956. The Clavariaceae of the Mussoorie hills. IV. *J. Indian bot. Soc.* **35** (3): 323-332.
14. **Thind, K.S.** and Anand, G.P.S. 1956. The Clavariaceae of the Mussoorie hills. V. *J. Indian bot. Soc.* **35** (4): 512-521.
15. **Thind, K.S.** and Adlakha, K.L. 1956. Thelephoraceae of the Mussoorie Hills - I. *Indian J. of Mycol. Res.* **2** (1-2): 57-64.
16. **Thind, K.S.** and Sandhu, R.S. 1956. Studies on the nutrition of *Gloeosporium psidii* (G. Del.) Sacc., the incitant of the Guava (*Psidium guajava* L.) anthracnose. *Indian Phytopath.* **9**: 207-208.
17. Martin, G.W., **Thind, K.S.** and Sohi, H.S. 1957. The myxomycetes of the Mussoorie hills. IV. *Mycol.* **49** (1): 128-133.
18. **Thind, K.S.**, Sohi, H.S. and Manocha, M.S. 1957. The myxomycetes of the Mussoorie Hills - VI. *Res. Bull. of the Panjab Univ. Botany* **102**: 229-240.
19. **Thind, K.S.**, Rehill, P.S. 1957. The Myxomycetes of the Mussoorie hills. VII. *Indian Phytopath.* **10** (2): 86-96.
20. **Thind, K.S.** and Manocha, M.S. 1957. The Myxomycetes of the Mussoorie hills - VIII. *Indian*

- Phytopath.* **10** (2): 97-106.
21. **Thind, K.S.** and Dev, S. 1957. The Clavariaceae of the Mussoorie hills. VI. *J. Indian bot. Soc.* **36** (1): 92-103.
22. Corner, E.J.H., **Thind, K.S.** and Dev, S. 1957. The Clavariaceae of the Mussoorie hills (India). VII. *Trans. of the Brit. Mycol. Soc.* **40** (4): 472-476.
23. **Thind, K.S.** and Devi, S. 1957. The Clavariaceae of the Mussoorie Hills-VIII. *J. Indian bot. Soc.* **36**: 475-485.
24. **Thind, K.S.** and Batra, L.R. 1957. The Pezizaceae of the Mussoorie hills. I. *J. Indian bot. Soc.* **36** (1): 51-60.
25. **Thind, K.S.** and Sethi, J.S. 1957. The Pezizaceae of the Mussoorie Hills-II. *J. Indian bot. Soc.* **36**: 196-206.
26. **Thind, K.S.** and Sethi, J.S. 1957. The Pezizaceae of the Mussoorie Hills - III. *Indian Phytopath.* **10** (1): 26-37.
27. **Thind, K.S.** and Sethi, J.S. 1957. The Pezizaceae of the Mussoorie Hills IV. *J. Indian bot. Soc.* **36**: 428-438.
28. **Thind, K.S.**, Cash, E.K. and Sethi, J.S. 1957. The Pezizaceae of the Mussoorie Hills (India). V. *Mycol.* **49** (6): 831-836.
29. **Thind, K.S.** and Chatrath, M.S. 1957. The Polyporaceae of the Mussoorie Hills - II. *Res. Bull. Panj. Univ. Botany* **125**: 431-442.
30. **Thind, K.S.**, Bindra, P.S. and Chatrath, M.S. 1957. The Polyporaceae of the Mussoorie Hills - III. *Res. Bull. Panj. Univ. Botany* **129**: 471-483.
31. **Thind, K.S.** and Randhawa, H.S. 1957a. Studies on the nutrition of fungi-I. The influence of different sources of carbon on the growth and sporulation of *Colletotrichum capsici* (Syd.) Butler and Bisby. *Proc. Nat. Acad. Sci. (India)* **27B**: Part 1, 39-46.
32. **Thind, K.S.** and Randhawa, H.S. 1957b. Studies on the nutrition of fungi-II. The influence of different sources of nitrogen on the growth and sporulation of *Colletotrichum capsici* (Syd.) Butler and Bisby. *Proc. Nat. Acad. Sci. (India)* **27B**: Part 1, 47-52.
33. **Thind, K.S.** and Randhawa, H.S. 1957c. Studies on the nutrition of *Colletotrichum capsici* (Syd.) Butler and Bisby- the incident of die back of chillies. *Curr. Sci.* **26**: 17-18.
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35. **Thind, K.S.** and Manocha, M.S. 1958. The Myxomycetes of the Mussoorie Hills-IX. *Indian Phytopath.* **11**: 10-22.
36. Corner, E.J.H., **Thind, K.S.** and Dev, S. 1958. The Clavariaceae of the Mussoorie Hills-IX. *Trans. Brit. mycol. Soc.* **41**: 203-206.
37. Reid, D.A., **Thind, K.S.** and Adalkha, K.L. 1958. The Thelephoraceae of the Mussoorie Hills (India). II. *Trans. Brit. mycol. Soc.* **41** (1): 129-134.
38. **Thind, K.S.** and Raswan, G.S. 1958. The Clavariaceae of the Mussoorie Hills - X. *J. of Ind. Bot. Soc.* **37** (4): 455-469.
39. **Thind, K.S.** and Rehill, P.S. 1958. The myxomycetes of the Mussoorie hills - XI. *Indian Phytopath.* **11** (2): 96-109.
40. **Thind, K.S.** and Rawla, G.S. 1958. Studies on the nutrition of fungi-III. The influence of different sources of carbon on the growth of three anthracnose fungi. *Proc. Nat. Acad. Sci. (India)* **28B**: 373-378.
41. Martin, G.W., **Thind, K.S.** and Rehill, P.S. 1959. The myxomycetes of the Mussoorie hills (India). X. *Mycol.* **51** (2): 159-162.
42. Reid, D.A., **Thind, K.S.** and Chatrath, M.S. 1959. The Polyporaceae of the Mussoorie Hills (India). IV. *Trans. Brit. Mycol. Soc.* **42** (1): 40-44.
43. **Thind, K.S.** and Singh, P. 1959. The Pezizaceae of the Mussoorie Hills - VI. *J. of Indian Bot. Soc.* **38** (2): 221-232.
44. **Thind, K.S.**, Cash, E.K. and Singh, P. 1959. The Helotiales of the Mussoorie Hills - II. *Mycol.* **51** (6): 833-839.
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47. **Thind, K.S.**, Cash, E.K. and Sethi J.S. 1959. The Pezizaceae of the Mussoorie Hills-VII. *Mycol.* **51**: 457-464.
48. **Thind, K.S.** and Sharma, S.R. 1959. *Physoderma* on *Trifolium alexandrinum* Linn. *Indian Phytopath.* **12** (2): 122-130.
49. **Thind, K.S.** and Chatrath, M.S. (1960). Polyporaceae of the Mussoorie hills. I. *Indian Phytopath.* **12** (1): 76-89.
50. **Thind, K.S.** and Sehgal, H.S. 1960. The myxomycetes of India. XIII. *Indian Phytopath.* **13** (2): 103-117.
51. **Thind, K.S.** and Singh, P. 1961. The Helotiales of the Mussoorie hills. I. *J. Indian Bot. Soc.* **40** (3): 295-308.
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53. **Thind, K.S.** and Gill, P.S. 1961. Studies on the Nutrition of fungi-V. The influence of various carbon sources on the growth of *Alternaria brassicae* (Berk.) Sacc. *Proc. Nat. Acad. Sci. (India)* **31B**: 156-159.
54. **Thind, K.S.** and Rawla, G.S. 1961. A new fungus on *Cyperus iria*. *Amer. J. of Bot.* **48** (10): 859-862.
55. Corner, E.J.H. and **Thind, K.S.** 1961. Dimorphic species of *Ramaria* (Clavariaceae). *Trans. Brit. Mycol. Soc.* **44** (2): 233-238.
56. **Thind, K.S.** and Sehgal, H.S. 1963a. The myxomycetes of India. XIV. *Indian Phytopath.* **16** (1): 34-43.
57. **Thind, K.S.** and Sehgal, H.S. 1963b. The Myxomycetes of India- XV. *Indian Phytopath.* **16**: 177-184.
58. **Thind, K.S.** and Sehgal, H.S. 1964. The myxomycetes of India. XVI. *Mycol.* **56** (4): 561-567.
59. **Thind, K.S.** and Manocha, M.S. 1964. The myxomycetes of India. XVII. *Mycol.* **56** (5): 712-717.
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61. **Thind, K.S.** and Singh, H. 1964. The Helotiales of India. III. *J. of Indian Bot. Soc.* **43** (4): 529-542.
62. **Thind, K.S.** and Mandahar, C.L. 1964. The influence of various carbon sources on the growth of *Cercospora* spp. *Proc. Nat. Acad. Sci. (India)* **34B**: 387-393.
63. **Thind, K.S.** and Mandahar, C.L. 1965. The influence of different sources of nitrogen on the growth of *Cercospora* spp. *Proc. Nat. Acad. Sci. (India)* **35B**: 248-254.
64. **Thind, K.S.** and Singh, H. 1965. The Helotiales of India - IV. *J. of Indian Bot. Soc.* **44** (1): 122-132.
65. **Thind, K.S.** and Mandahar, C.L. 1965. A fungus on the leaflets of *Cycas revolute* Thumb. *Res. Bull. (Sci.) Panjab Univ.* **16**: 313-314.
66. **Thind, K.S.** and Waraitch, K.S. 1966. The Pezizales of India - IX. *J. of Indian Bot. Soc.* **45** (3-4): 384-391.
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68. **Thind, K.S.** and Saini, S.S. 1967. The Helotiales of India - VI. *Mycol.* **59** (3): 467-774.
69. **Thind, K.S.** and Rattan, S.S. 1967. The Clavariaceae of India-XI. *Proc. Indian Acad. Sci. 66B*: 143-156.
70. **Thind, K.S.** and Rawla, G.S. 1967. Trace elements studies on six species of *Helminthosporium*. *Proc. Indian Acad. Sci.* **66B**: 250-265.
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76. **Thind, K.S.** and Lakhanpal, T.N. 1968. The myxomycetes of India - XXI. *Indian Phytopath.* **21** (2): 223-231.
77. **Thind, K.S.** and Mandahar, C.L. 1968. Trace elements studies on some pathogenic fungi. *Proc. Indian Acad. Sci.* **68B**: 37-51.
78. **Thind, K.S.** and Lakhanpal, T.N. 1968. The myxomycetes of India - XXII. *Mycol.* **60** (5): 1080-1085.
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80. **Thind, K.S.** and Khara, H.S. 1968. The Hydnaceae of North-Western Himalayas. *Symp. Indian Phytopath. Soc. Bull.* **4**: 25-33.
81. **Thind, K.S.** and Khara, H.S. 1969. The Myxomycetes of India- XXIII. *Proc. Indian Acad. Sci.* **69B**: 284-291, 1969.
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84. **Thind, K.S.** and Singh, H. 1969. The Helotiales of India - VIII. *Proc. of Indian Acad. Sci. Section 70B*: 251-261, 1 plate.
85. **Thind, K.S.** and Singh, H. 1969. The Helotiales of India-IX. *J. Indian bot. Soc.* **48**: 392-397.
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87. **Thind, K.S.** and Singh, H. 1970. The Helotiales of India - X. *Mycol.* **62** (3): 486-491.

88. **Thind, K.S.** and Singh, H. 1970. The Helotiales of India - XII. *J. of Indian Bot. Soc.* **49** (1-4): 141-150.
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