

RICHARD EVANS SCHULTES
(12 JANUARY 1915–10 APRIL 2001):
A TRIBUTE

GHILLEAN T. PRANCE¹

With the passing of Dick Schultes the Society for Economic Botany has lost one of its staunchest supporters who was the editor of this journal from 1962 to 1979. He was the Society's Distinguished Economic Botanist for 1979. Although the term ethnobotany was coined as early as 1895 by John Harshberger, Schultes can rightfully be called "The Father of Modern Ethnobotany." No single person has done more research in the field personally nor encouraged more people to enter the field of ethnobotany than Dick Schultes. At the 2001 meeting of the Society for Economic Botany in Honolulu it was amazing how many people acknowledged a Schultes connection of some sort. I am one of them. As a young botanist working in Amazonia I mentioned to Dick that I had been collecting plants in Yanomami Indian Territory and had observed their use of *Virola* as a hallucinogen. He immediately responded by asking me to write this up immediately for publication in *Economic Botany*. I explained that I was a systematist, not an ethnobotanist, but he insisted and before long I had a paper accepted for this journal (Prance 1970). With his encouragement, I began to make numerous ethnobotanical observations on my expeditions and to have the privilege of getting to know Schultes at meetings and on trips (Fig. 1). I have only worked in ethnobotany because of the urging of Dick Schultes. He had many students who studied with him and became well-known ethnobotanists such as Michael Balick, Robert Bye, Wade Davis, Tommie Lockwood, Timothy Plowman, Doel Soejarto and Andrew Weil to name a few, but he was an inspiration to many other people who never studied formally with him because he

was always generous with his time and advice. A visit to the Botanical Museum at Harvard was always a treat because of the amount of time that Dick would spend with one. He obviously enjoyed his role as a teacher and encourager. There are not many major professors who have had one of their students write a book about them, but naturally this has happened for Dick Schultes in the most entertaining book, *One River* by Wade Davis (1996). If you want to learn more about Dick's adventures in the Amazon region this is where to go.

I must recount how I first met Dick Schultes. It was during a symposium on the Amazon Biota held at Belém, Brazil in 1966. I do not remember how I, as a very junior post-doctoral botanist, managed to be at the same table at dinner in the famous restaurant there in the military fort. Perhaps it was because Dick was such an Anglophile? However, we were having a very jolly time and I was mainly listening to the wisdom of the gurus who were at my table. The beer flowed abundantly and it so happened that Dick and I needed to relieve ourselves of it at the same time. We were both in full stream at the urinal when Dick jumped back shouting "Oh my God." There had been a tarantula spider on the wall at the crucial height. Fortunately it did not jump towards Dick. We returned to the table and by that time Dick had recovered from the shock and was mirthfully recounting a good embellished story. We became good friends ever since that incident. It was a fortunate encounter for a young botanist, and thanks to a tarantula!

Dick started his work on ethnobotany as a Harvard University undergraduate with a study of the use of peyote by the Kiowa Indians of Oklahoma. His postgraduate thesis was a study of sacred plants in Oaxaca, Mexico and in 1941 he obtained his doctorate from Harvard. Most of his professional career was at Harvard after his

¹ McBryde Professor, National Tropical Botanical Garden, 3530 Papalina Road, Kalaheo, HI 96741 USA. E mail: gtolmiep@aol.com.



Fig. 1. Prof. Richard Evans Schultes enjoying a taste of *paella* in Cordoba, Spain (photo by G. T. Prance).

long absence in the Amazon region of Colombia. He returned to Harvard from the Amazon in 1953 to become Curator of the Oakes Ames Orchid Herbarium, in 1967, Curator of Economic Botany and in 1970 Director of the Botanical Museum and Edward Jeffrey Professor of Biology. A grant from the National Academy of Sciences took him to the Amazon region in 1941 to study curare, which at that time was just becoming of importance in medicine. His collection of more than 70 plants involved in curares made an invaluable contribution to knowledge about this complex mixture of plants used as arrow poisons in Amazonia. As a consequence of this work, he was in South America when World War II broke out. When he eventually reported to the US Embassy in Bogotá, Colombia, he was given an appropriate war assignment to study and collect rubber seeds in Amazonia. The supply of natural rubber from plantations in Malaysia was cut off by the Japanese occupation of that region and so Dick and other botanists were

sent off to collect seeds and herbarium specimens of *Hevea*. The result was that Dick spent 12 continuous years in Amazonia, much of it amongst indigenous peoples, which established him as the undisputed authority on the ethnobotany and floristic diversity of the Northwestern Amazon. This really fulfilled a dream, as his interest in exploration and in the Amazon region was stimulated when, at the age six, he was seriously ill and his parents read to him 'Notes of a Botanist on the Amazon and Andes' by Richard Spruce who became his hero and his inspiration. In 1970 he wrote a foreword to a reprint edition of Spruce's book and later several articles about him. He also helped to raise funds for the restoration of the headstone of Spruce's grave in Yorkshire, England. I well remember a 1992 visit in the company of Dick Schultes and other botanists who attended a meeting to celebrate the life and work of Spruce to the small village of Ganthorpe where Spruce was born. Dick was in his element and showed what an intimate knowledge he had gained about the life of Spruce. Dick eventually became one of the few overseas botanists to have spent longer in the Amazon than his hero Richard Spruce. He also chalked up as many adventures and faced as many dangers and illnesses as Spruce.

Dick's interest in Richard Spruce was in keeping with his Anglophile interests. After his initial work in Oklahoma he hardly acknowledged the United States West of the Hudson River and was closely linked to his life in New England and his interests in the United Kingdom. One of his great loves was the Linnean Society of London of which he was a fellow since 1950 and was elected to the honour of Foreign Member in 1987. He was also proud to have been one of the few Americans to receive the Linnean Society's gold medal for botany, which was awarded to him in 1992. I received a constant supply of nomination forms to fellowship of the Linnean Society to second the proposals for membership made by Dick. He was one of the best recruiters to the Society. He was known for using the "proper" English spelling of words in all of his writings. Among many British friends of the Schultes family was Patrick Brenan, one of my predecessors as Director of the Royal Botanic Gardens, Kew. The Brenans and the Schultes exchanged children for visits to each other's homes.

The Linnean Society was just one of many

organizations that honoured Dick Schultes. His various honours are too many to list, but being awarded the Cruz de Boyacá from President Betancur of Colombia, the Gold Medal of World Wildlife Fund from H. R. H. Prince Philip, Duke of Edinburgh, election to the scientific academies of Colombia, Argentina, India, The National Academy of Sciences and the Third World Academy of Sciences all showed that his recognition was worldwide. He received the Tyler Ecology Prize in 1987 in recognition for his work on the ethnopharmacological conservation of Amazonia and in 1994 he was a laureate of the Global 500 Forum of the United Nations Environmental Programme. The Colombian government named a 226 000 acre protected area of Amazonian forest "Sector Schultes."

Much attention has been given to Dick's work on hallucinogenic and narcotic plants and he was an undisputed world authority in that area. However, he also did much research in other areas, as can be seen in the bibliography which follows. His book on medicinal plants of the upper Amazon, *The Healing Forest* (Schultes and Raffauf 1992), is a classic reference on medicinal plants of the Northwest of Amazonia that describes the uses of 1600 species in local medicine. Because of his early assignment to collect seeds of rubber he also became a leading authority on the rubber genus *Hevea*. It is a great pity that he did not remain well enough towards the end of his life to complete his monograph of that genus, although he published a number of papers on rubber. Following in the footsteps of his mentor and predecessor at the Botanical Museum of Harvard he also published many papers about orchids. In other words Dick Schultes was an "all rounder" as we say in England. His work on ethnobotany was so successful because of his friendly and courteous way of treating native peoples. In a 1992 article about Schultes he is quoted as saying, "I do not believe in hostile Indians. All that is required to bring out their gentlemanliness is reciprocal gentlemanliness." This obviously worked well for Dick who took the trouble to learn a lot of the Witoto and Makuna languages. He was a true gentleman and he expected gentlemanliness in return. On the one hand very conservative in his political view and on the other a libertarian who spoke out freely on individual freedom and personal choice on such issues as religion, sexual orientation, abortion and the use of drugs.

Dick was also a major collector of herbarium specimens of the flora of northwestern Amazonia having collected more than 24 000 numbers. From these over 300 have been described as new and more than 60 of these bear the specific epithets "schultesii" or "schultesiana." He is also commemorated by the plant genera *Schultesiophytum*, *Schultesianthus* and *Resia* and a genus of cockroach *Schultesia*. His collections are extremely important for anyone studying Amazonian plants.

We will all miss Richard Evans Schultes greatly, but the best way in which we can continue to honour this giant of ethnobotany is to see that this discipline continues to flourish and also to promote the conservation of his beloved Amazonian rainforest, something Dick was doing long before it became fashionable so to do.

ACKNOWLEDGMENTS

I am grateful to Michael Balick, Richard Hanna, Philip Moravcik, and Brenda A. Carey for their assistance in compiling the scientific bibliography of Richard E. Schultes.

REFERENCES

- Davis, W.** 1996. One river. New York, Simon & Schuster.
Prance, G. T. 1972. Notes on the use of plant hallucinogens in Amazonian Brazil. *Economic Botany* 24:62–68.

SCIENTIFIC BIBLIOGRAPHY OF RICHARD EVANS SCHULTES

BOOKS

- Vestal, P. A., and R. E. Schultes.** 1941. *Economic botany of the Kiowa Indians*. Botanical Museum, Cambridge, Mass.
- Schultes, R. E.** 1941. A contribution to our knowledge of *Rivea corymbosa*, the narcotic ololiuqui of the Aztecs. Botanical Museum, Cambridge, Mass. 45p.
- Schultes, R. E.** 1960. *Native orchids of Trinidad and Tobago*. Pergamon Press, Oxford.
- Schultes, R. E., and A. S. Pease.** 1963. *Generic names of orchids—their origin and meaning*. Academic Press, New York.
- Schultes, R. E., and A. F. Hill.** 1968. *Plants and human affairs*. Botanical Museum, Cambridge, Mass. (Ed. 1, 1960; Ed. 2, 1968).
- Schultes, R. E., and A. Hofmann.** (Ed. 1, 1973; Ed. 2, 1980). *The botany and chem-*

- istry of hallucinogens. Charles C Thomas Publishers, Springfield, Ill.
7. **Schultes, R. E.** 1976. Hallucinogenic plants. Western Publishing Co., Racine, Wisconsin.
 8. **Schultes, R. E.** 1976. Atlas des Plantes Hallucinogènes du Monde. L'Aurore, Montreal.
 9. **Schultes, R. E., and A. Hofmann.** 1979. Plants of the gods. McGraw-Hill Book Co., N.Y. Reprinted Healing Arts Press 1992.
 10. **Schultes, R. E., and A. Hofmann.** 1980. Pflanzen des Götter—die Magischen Kräfte der Rausch- und Giftgewächse. Hallwag Verlag, Bern.
 11. **Schultes, R. E., and A. Hofmann.** 1981. Les Plantes des Dieux—les Plantes Hallucinogènes, Botanique et Ethnologie. Berger-Levrault, Paris.
 12. **Schultes, R. E., and A. Hofmann.** 1982. Plantas de los Dioses. Fondo de Cultura Economica, Mexico.
 13. **Schultes, R. E., and A. Hofmann.** 1982. Plantas Alucinógenas. Prensa Medica Mexicana, Mexico.
 14. **Schultes, R. E., and W. A. Davis.** 1982. The glass flowers at Harvard. E. P. Dutton, Inc. New York.
 15. **Schultes, R. E., and A. Hofmann.** 1983. Botanica e Chimica degli Allucinogeni. Cesce Ciapanna Editore, Roma.
 16. **Schultes, R. E.** 1988. Where the gods reign: plants and peoples of the Colombian Amazon. Synergetic Press, 306 p.
 17. **Schultes, R. E., and R. F. Raffauf.** 1990. The healing forest: medicinal and toxic plants of the Northwest Amazonia. Historical, ethno and economic botany series; 2: 484 p. Dioscorides Press, Portland, Oregon
 18. **Schultes, R. E., and R. F. Raffauf.** 1991. Vine of the soul: medicine men, their plants and rituals in the Colombian Amazonia. Synergetic Press.
 - 18b. **(Book added in proof) Schultes, R. E., and S. von Reis.** 1995. Ethnobotany, evolution of a discipline. Chapman Hall, London and New York.
- ARTICLES IN ENCYCLOPEDIAS
19. **Schultes, R. E.** 1961. Venomous plants. *In* Encyclopedia of the biological Sciences, P. Gray (Ed.). Reinhold Publishing Corp., New York, 1051–1053.
 20. **Schultes, R. E.** 1966. Orchids. *In* Encyclopedia Britannica, Chicago, Ill. 1039–1044. Osier. 1137–1138.
 21. **Schultes, R. E.** 1966. Plants and plant sciences: importance of plants to man. 1236–1238.
 22. **Schultes, R. E.** 1966. Poisonous plants of South America. *In* International encyclopedia of veterinary medicine, T. Dalling (Ed.), W. Green and Sons, Ltd., Edinburgh, 2344–2348.
 23. **Schultes, R. E.** 1967. Toxic plants. *In* Encyclopedia of biochemistry, Reinhold Publishing Corp., New York, 799–803.
 24. **Schultes, R. E.** 1970. Plant hallucinogens. *In* McGraw-Hill yearbook of science and technology, McGraw-Hill, New York, 356–359.
 25. **Schultes, R. E.** 1983. From ancient plants to modern medicine. *In* 1984 yearbook of science and the future, Encyclopedia Britannica, Inc., Chicago, 172–187.
- IN VARIOUS JOURNALS
26. **Schultes, R. E.** 1936. Peyote and plants used in the peyote ceremony. Botanical Museum Leaflets Harvard Univ. 4:129–152.
 27. **Schultes, R. E.** 1937. Peyote and the American Indian. Nature Magazine 30: 155–157.
 28. **Schultes, R. E.** 1937. Peyote and plants confused with it. Botanical Museum Leaflets Harvard Univ. 5:61–68.
 29. **Schultes, R. E.** 1938. The appeal of peyote (*Lophophora Williamsii*) as a medicine. American Anthropologist 40:698–715.
 30. **Schultes, R. E.** 1938. Peyote, an American Indian heritage from Mexico. El. Mex. Ant. 4:199–208.
 31. **Schultes, R. E.** 1939. Plantae Mexicanae II. The identification of teonanacatl, a narcotic basidiomycete of the Aztecs. Botanical Museum Leaflets Harvard Univ. 7:37–56.
 32. **Schultes, R. E.** 1940. The aboriginal therapeutic uses of *Lophophora Williamsii*. Cactus and Succulent Journal 12:177–181.
 33. **Schultes, R. E.** 1940. *Sobralia macrantha* in Oaxaca. American Orchid Society Bull. 9:88–89.

34. **Schultes, R. E.** 1940. Teonanacatl—the narcotic mushroom of the Aztecs. *American Anthropologist* 42:429–443.
35. **Schultes, R. E.** 1941. Contribuciones al conocimiento de la botánica de Oaxaca I. *An. Inst. Biol. México* 12:69–73.
36. **Schultes, R. E.** 1941. Contribuciones al conocimiento de la botánica de Oaxaca II. *An. Inst. Biol. México* 12:75–80.
37. **Schultes, R. E.** 1941. A contribution to our knowledge of *Rivea corymbosa*, the narcotic Ololiuqui of the Aztecs. *Botanical Museum Harvard Univ.*
38. **Schultes, R. E.** 1942. *Plantae Colombianae* I. A new species of *Herrania* from the Putumayo. *Caldasia* 4:19–24.
39. **Schultes, R. E., and C. V. Morton.** 1942. Localidades visitadas y rutas recorridas por el. E. W. Nelson en el estado de Oaxaca. *An. Inst. Biol. Mexico* 13:47–61.
40. **Schultes, R. E.** 1942. *Plantae Colombianae* II. Yoco: a stimulant of Southern Colombia. *Botanical Museum Harvard Univ.*
41. **Schultes, R. E.** 1943. Contribuciones al conocimiento de la botánica de Oaxaca III. *An. Inst. Biol. México* 14:137–140.
42. **Schultes, R. E.** 1943. *Plantae Austroamericanae* I. Novae notiones conjunctionesque generis *Herrania*. *Caldasia* 6:11–26.
43. **Schultes, R. E.** 1943. *Plantae Colombianae* III. Investigationes specierum *Saurauiae*: locus primus. *Caldasia* 6:27–45.
44. **Schultes, R. E.** 1943. *Plantae colombianae* IV. Una planta estimulante del Putumayo. *Rev. Fac. Nac. Agron.* 5:59–79.
45. **Schultes, R. E.** 1943. *Plantae Colombianae* V. Species nova generis *Herrania*. *Caldasia* 8:261–264.
46. **Schultes, R. E.** 1944. *Plantae Colombianae* VII. Novae notiones generis *Paullinia*. *Caldasia*. 10:419–423.
47. **Schultes, R. E.** 1944. *Plantae Colombianae* VIII. *Caldasia*. 11:23–32.
48. **Schultes, R. E.** 1944. *Plantae Colombianae* IX. *Caldasia*. 3:121–130.
49. **Schultes, R. E.** 1945. *Plantae Colombianae* X. *Caldasia*. 13:247–254.
50. **Schultes, R. E.** 1945. Uso del tabaco entre los Huitotos. *Agric. Tropo.* 9:19–22.
51. **Schultes, R. E.** 1945. Glimpses of the little-known Apaporis River in Colombia. *Chronica Botanica* 9:123–127.
52. **Schultes, R. E.** 1945. Estudio preliminar del género *Hevea* en Colombia. *Rev. Acad. Col. Cienc. Exact., Fis.-Quim., Nat.* 6(22/23):331–338.
53. **Schultes, R. E.** 1946. Aprovechamiento científico de una riqueza natural Colombiana. *Agric. Trop.* 2(12):31–42.
54. **Schultes, R. E.** 1946. Esperanza agronómica para la Amazonia Colombiana. *Agric. Trop.* 2(2):3–22.
55. **Schultes, R. E.** 1946. Estudio preliminar del género *Hevea* en Colombia. *Rev. Fac. Nac. Agron.* 6:18–45.
56. **Schultes, R. E.** 1946. El uso del formol en la recolección de plantas. *Rev. Fac. Nac. Agron.* 6:46–52.
57. **Schultes, R. E., and A. Uribe.** 1947. The future of rubber-growing in Colombia. *Agric. Americas* 7:127–130.
58. **Schultes, R. E.** 1947. The use of formaldehyde in plant collecting. *Rhodora* 49:54–60.
59. **Schultes, R. E.** 1947. Razones que aseguran el porvenir de la industria cauchera en Colombia. *Agric. Trop.* 3(2):25–31.
60. **Schultes, R. E.** 1948. The importance of plant classification in *Hevea*. *Economic Botany* 3:84–88.
61. **Schultes, R. E.** 1949. *Plantae Colombianae* XI. De plantis principaliter Colombiae vallis Amazonicae observationes. *Botanical Museum Leaflets Harvard Univ.* 13:293–332.
62. **Schultes, R. E.** 1949. *Plantae Colombianae* XII. De plantis principaliter Amazoniae Colombianae investigationes. *Botanical Museum Leaflets Harvard Univ.* 14:21–45.
63. **Schultes, R. E.** 1949. *Plantae Austro-Americanae* V. De plantis principaliter Colombiae observationes. *Botanical Museum Leaflets Harvard Univ.* 13:261–292.
64. **Schultes, R. E.** 1950. *Plantae Austro-Americanae* VI. Plantarum principaliter vallis Amazoniae novarum vel minus cognitatarum notae diversae. *Botanical Museum Leaflets Harvard Univ.* 14:109–136.
65. **Schultes, R. E.** 1951. *Plantae Austro-Americanae* VII De festo seculari Ricardi Sprucei America australi adventu commemoratio atque de plantis principaliter vallis Amazonicis diversae observationes. *Botanical Museum Leaflets Harvard Univ.* 15:29–78.
66. **Schultes, R. E.** 1951. La riqueza de la flo-

- ra Colombiana. Rev. Acad. Col. Cienc. Exact., Fís.-Quím., Nat. 8(30):230–242.
67. **Schultes, R. E.** 1951. Contribución al conocimiento de la flora amazónica de Colombia I. Rev. Acad. Col. Cienc. Exact., Fís.-Quím., Nat. 8(31):397–409.
68. **Schultes, R. E.** 1951. El género *Herrania*, pariente silvestre del cacao cultivado. Agric. Trop. 7(7):43–48.
69. **Schultes, R. E.** 1951. La importancia de la taxonomía en el estudio de los cauchos *Hevea*. Agric. Trop. 7(1):33–40.
70. **Schultes, R. E.** 1951. *Le Paullinia yoco* et son emploi comme stimulant. Rev. Int. Bot. Appl. Agric. Trop. no. 343–344, 279–311.
71. **Schultes, R. E.** 1951. Oakes Ames. Proc. Linnean Soc. London Section, 162:223–228.
72. **Schultes, R. E.** 1951. Oakes Ames, 1874–1950. *Rhodora* 53:67–78.
73. **Alston, J. A. H. G., and R. E. Schultes.** 1951. Studies of early specimens and records of *Ilex vomitoria*. *Rhodora* 53:273–279.
74. **Schultes, R. E.** 1952. A new *Aristolochia* from Amazonian Colombia. Botanical Museum Leaflets Harvard Univ. 15:185–190.
75. **Schultes, R. E.** 1952. Las caucherías del Vaupés. Terr. Nac. (Colombia) 2(4):14–14, 34.
76. **Schultes, R. E.** 1952. La familia de las Velloziáceas en Colombia. Rev. Acad. Col. Cienc. Exact., Fís.-Quím., Nat. 8(32):458–463.
77. **Schultes, R. E.** 1952. *Plantae Colombianae XIII. Investigationes specierum Saurauiae: locus tertius.* *Mutisia* 3:1–5.
78. **Schultes, R. E., and H. García-Barriga.** 1952. Dos nuevas especies de plantas del Río Apaporis en Colombia. *Mutisia* 12:1–9.
79. **Schultes, R. E.** 1952. El cauchero abandonado del Vaupés. Rev. Nac. Agric. 564:1–8.
80. **Schultes, R. E.** 1952. Las caucherías del Vaupés. *El Financiero* 8:39–44.
81. **Schultes, R. E.** 1953. Richard Spruce still lives. *Northern Gardener* 7:20–27, 55–61, 87–93, 121–125.
82. **Schultes, R. E.** 1953. Una reseña fitogeográfica de la Amazonia noroeste. Agric. Trop. 8:9–19.
83. **Schultes, R. E.** 1953. Una reseña fitogeográfica de la Amazonia noroeste. Publ. Institut. Lingu. Ethnogr. Amaz. Col. 195–202.
84. **Schultes, R. E.** 1953. Notes on *Zamia* in the Colombian Amazonia. *Mutisia* 15:1–6.
85. **Schultes, R. E.** 1953. A narcotic morning-glory. Rev. Soc. Cub. Bot. 10:61–68, 101–107.
86. **Schultes, R. E.** 1953. *Plantae Austro-Americanae VIII. De plantis principaliter vallis Amazonicis novis vel criticis notae diversae.* Botanical Museum Leaflets Harvard Univ. 16:57–95.
87. **Schultes, R. E.** 1954. Un nouveau tabac a priser de l'Amazonie du nord-ouest. Journ. Agric. Trop. Bot. Appl. 7–9:298–311.
88. **Schultes, R. E.** 1954. *Plantae Austro-Americanae IX. Plantarum novarum vel notabilium notae diversae.* Botanical Museum Leaflets Harvard Univ. 16:179–228.
89. **Schultes, R. E.** 1954. A new narcotic snuff from the northwest Amazon. Bot. Mus. Leaf. Harvard Univ. 16:241–260.
90. **Schweinfurth, C., and R. E. Schultes.** 1954. The new dwarf *Habenaria* from Amazonian Colombia. American Orchid Society Bull. 23:820–822.
91. **Schultes, R. E.** 1955. In the land of the intoxicating trees: the high Colombian valley of Sibundoy. Illus. London News 227(1119):1124–1125.
92. **Joy, A. F., and R. E. Schultes.** 1955. Twelve years in a green heaven. *Natural History* 64:120–127, 165.
93. **Schultes, R. E.** 1955. Publication of the monumental plates of the Botanical Expedition to New Grenada (1760–1817). American Orchid Society Bull. 24:257–259.
94. **Schultes, R. E., and P. Ponce de Leon.** 1955. Rancho Pilila—an orchidophile's mecca in Cuba. American Orchid Society Bull. 24:373–374.
95. **Schultes, R. E.** 1955. *Navia*: an ancient and extraordinary bromeliad genus. Bull. Bromel. Soc. 5:20–28.
96. **Schultes, R. E.** 1955. El guaraná: su historia y su uso. Agric. Trop. 11:131–140.
97. **Schultes, R. E.** 1955. El curioso rapé *yakee* del oriente de Colombia. Agric. Trop. 11:329–335.
98. **Schultes, R. E.** 1955. Una carta inédita del maestro Guillermo Valencia. Agric. Trop. 11:329–335.

99. **Schultes, R. E.** 1955. A new narcotic genus from the Amazon slope of the Colombian Andes. *Botanical Museum Leaflets Harvard Univ.* 17:1–11.
100. **Schultes, R. E.** 1956. The devil's morning glory. *Nature Magazine* 49:463–464, 498.
101. **Schultes, R. E.** 1956. A new plant source of narcotic drugs: *Methysticodendron amesianum*. *Bull. Narcotics* 8(4):1–5.
102. **Schultes, R. E.** 1956. *Methysticodendron amesianum* decouverte sur les pentes montagnees de l'Amazonie, dans les Andes Colombiennes, d'une nouvelle plante contenant un precipe stupefiant. *Bull. Stuper. (United Nations)* 8:1–4.
103. **Schultes, R. E.** 1956. The strange narcotic snuffs of eastern Colombia: their source, preparation and effect on an American botanist. *Illus. London News* 229:520–521.
104. **Schultes, R. E.** 1956. A new species of *Epistephium* from Colombia. *American Orchid Society Bull.* 25:259–262.
105. **Schultes, R. E.** 1956. The orchids of the island of Grenada, British West Indies. *American Orchid Society Bull.* 25:384–394.
106. **Schultes, R. E.** 1956. The Amazon Indian and evolution in *Hevea* and related genera. *Journ. Arn. Arb.* 37:123–148.
107. **Schultes, R. E.** 1956. A powerful new narcotic. *Chem. and Druggist* 166, 3992:200.
108. **Schultes, R. E.** 1957. Elmer Drew Merrill—an appreciation. *Taxon* 6:89–101.
109. **Schultes, R. E.** 1957. Orchidaceae Neotropicales II. De orchidaceis principaliter colombianis notulae. *Caldasia* 7:339–356.
110. **Beaman, J.H., and R. E. Schultes.** 1957. Notes on orchids from La Bayamesa, Cuba. *Rhodora* 59:245–251.
111. **Schultes, R. E.** 1957. Orchidaceae Neotropicales III. De orchidaceis insularum Trinidad et Tobago notulae additiciae. *Rhodora* 59:280–289.
112. **Schultes, R. E.** 1957. A new method of coca preparation in the Colombian Amazon. *Botanical Museum Leaflets Harvard Univ.* 17:241–246.
113. **Schultes, R. E.** 1957. The identity of the Malpighiaceae narcotics of South America. *Botanical Museum Leaflets* 18:1–56.
114. **Schultes, R. E.** 1958. *Plantae Austro-Americanae X. America australis plantae novae vel alia ratione significantes. Botanical Museum Leaflets Harvard Univ.* 18:113–180.
115. **Schultes, R. E.** 1958. The name *Lepanthes turialvae*: a source of confusion. *Rhodora* 60:97–100.
116. **Schultes, R. E.** 1958. Orchids in Trinidad and Tobago and their collectors. *American Orchid Society Bull.* 27:75–88.
117. **Schultes, R. E.** 1958. A synopsis of the genus *Herrania*. *Journ. Arn. Arb.* 39:217–278.
118. **Schultes, R. E.** 1958. Terrain and rubber plants in the upper Apaporis of Colombia. *Suelos Ecuador* 1:121–137.
119. **Schultes, R. E.** 1958. Hacia un censo de la flora de Colombia. *Univ. Nac. Col.* 23:77–102.
120. **Schultes, R. E.** 1958. Orchidaceae Neotropicales V. Generis *Aganisiae* synopsis. *Lloydia* 21:88–89.
121. **Schultes, R. E.** 1958. Gillette and his Kian Loy Gardens in Trinidad. *American Orchid Society Bull.* 27:658–660.
122. **Schultes, R. E., and G. W. Dillon.** 1959. Synopsis of the genus *Lepanthes* in Mexico. *Rhodora* 61:1–20.
123. **Schultes, R. E.** 1959. La flora de Colombia y el Instituto de Ciencias Naturales. *Rev. Acad. Col. Cienc. Exact., Fís.-Quím., Nat.* 10(41):449–456.
124. **Schultes, R. E.** 1959. *Plantae Colombianae XV. Plantae novae Colombianae orientalis descriptiones. Botanical Museum Leaflets Harvard Univ.* 18:305–318.
125. **Schultes, R. E.** 1959. (Foreword to) B. Ames, drawings of Florida orchids, *Botanical Museum of Harvard University, Cambridge, Mass. (Ed. 2) vii–ix.*
126. **Schultes, R. E.** 1960. Etymologists loose amongst the orchids. *American Orchid Society Bull.* 29:86–93.
127. **Schultes, R. E.** 1960. Harvard's ever blooming garden in glass. *Caroline Tips* 23:5–6.
128. **Schultes, R. E.** 1960. Native narcotics of the New World. *Pharm. Sci. Third Lect. Ser.* 142–167; 1961, *Texas Journal Pharmacology* 2:142–167.
129. **Schultes, R. E.** 1960. Botany attacks the hallucinogens. *Pharm. Sci. Third Lect. Ser.* 169–185; 1961, *Texas Journal Pharmacology* 169–185.
130. **Schultes, R. E.** 1960. Tapping our heritage

- of ethnobotanical lore. *Economic Botany* 14:257–262; 1961, *Chemurg. Dig.* 20:10–12.
131. **Schultes, R. E., and R. F. Raffauf.** 1960. *Prestonia*: an Amazon narcotic or not? *Botanical Museum Leaflets Harvard Univ.* 19:109–122.
132. **Schultes, R. E.** 1961. *Aganisia cynaea*—jewel of the jungle. *American Orchid Society Bull.* 30:558–562.
133. **Schultes, R. E.** 1962. Edible fruits of *Solanum* in Colombia. *Botanical Museum Leaflets Harvard Univ.* 19:235–286.
134. **Schultes, R. E.** 1962. The role of the ethnobotanist in the search for new medicinal plants. *Lloydia* 25:257–262.
135. **Schultes, R. E.** 1963. *Plantae Austro-americanae XI. De plantis principaliter ex Colombiae orientalibus partibus notulae.* *Rhodora* 63:1–21.
136. **Schultes, R. E.** 1963. Frederic Tracy Hubbard (1875–1962). *Taxon* 12:1–2.
137. **Schultes, R. E.** 1963. Jaime Jaramillo-Arango. *Taxon* 12:41–43.
138. **Schultes, R. E.** 1963. Hallucinogenic plants of the New World. *Harvard Rev.* 1: 18–32.
139. **Schultes, R. E.** 1963. The widening panorama in medical botany. *Rhodora* 65:97–120.
140. **Schultes, R. E.** 1963. Botanical sources of the New World narcotics. *Psyched. Rev.* 1: 145–166.
141. **Schultes, R. E.** 1963. *Plantae Colombianae XVI. Plants as oral contraceptives in the northwest Amazon.* *Lloydia* 26:67–74.
142. **Schultes, R. E.** 1964. The nomenclature of two Mexican narcotics. *Taxon* 13:65–66.
143. **Schultes, R. E.** 1964. *Plantae Colombianae XVII. Philodendra ex regione amazoniae nova.* *Rhodora* 66:119–126.
144. **Schultes, R. E.** 1964. *Plantae Colombianae XVIII. De plantis regiones Amazonicae notae.* *Botanical Museum Leaflets Harvard Univ.* 20:317–324.
145. **Schultes, R. E.** 1964. Foreword *In Flora de la Real Expedición Botánica del Nuevo Reino de Orchidaceae*, Pt. 1, 3–7. Ed. *Cultura Hispánica*, Madrid.
146. **Schultes, R. E.** 1965. Harvard's Botanical Museum—a centre for world-wide research. *In* (Ed. G. Bowden) *Journey through New England—a guide.* Boston, Mass. 68–69.
147. **Schultes, R. E.** 1965. El amplio panorama de la botánica médica. *Rev. Acad. Col. Cienc. Exact., Fís-Quím., Nat.* 12(47): 269–275.
148. **Schultes, R. E., and M. Rinkel.** 1965. Transcultural significance of “magic plants.” *Committee on Transcultural Psychiatry of the American Psychiatric Assn.*
149. **Schultes, R. E.** 1965. Ein halbes Jahrhundert Ethnobotanik der amerikanischen Halluzinogene. *Planta Medica* 13:125–157.
150. **Schultes, R. E.** 1966. The search for new natural hallucinogens. *Lloydia* 29:293–308.
151. **Schultes, R. E.** 1966. The impact of Spruce's Amazon exploration on modern phytochemical research. *Ciência e Cultura* 20:37–49.
152. **Schultes, R. E.** 1966. Lactiferous plants of the Karaparaná-Igaraparaná region of Colombia. *Acta Bot. Neerl.* 15:178–189.
153. **Schultes, R. E.** 1966. (Foreword) *In A Quarter Century of Publications of the Botanical Museum of Harvard University: 1940–1965.* *Botanical Museum of Harvard University, Cambridge, Mass.* i–iv.
154. **Schultes, R. E.** 1967. *De plantis toxicariis e mundo novo tropicale commentationes I.* *Botanical Museum Leaflets Harvard Univ.* 21:265–283.
155. **Schultes, R. E.** 1967. Historia romántica de los nombres de las orquídeas. *Rev. Soc. Col. Orquideolog.* 2:45–53.
156. **Schultes, R. E.** 1967. Orchidaceae. *In Flora of Trinidad and Tobago* 3(1):13–200.
157. **Schultes, R. E.** 1967. The place of ethnobotany in the ethnopharmacologic search for psychotomimetic drugs. *In* (Ed. D. Efron) *Ethnopharmacologic search for psychoactive drugs.* U.S. Govt. Printing Office, Washington, D.C. 33–57; Reprinted 1979 in (Ed. 2) *Raven Press, New York*, 33–57.
158. **Schultes, R. E.** 1967. The botanical origins of South American snuffs. *In* (Ed. D. Efron) *Ethnopharmacologic search for psychoactive drugs.* U.S. Govt. Printing Office, Washington, D.C., 291–306; Reprinted 1979 in (Ed. 2) *Raven Press, New York*, 291–306.
159. **Schultes, R. E.** 1967. Duzentos anos de

- estudos taxonômicos no gênero *Hevea*. Atas Simpósio Biota Amazônica (Bot.) 4: 241–258.
160. **Schultes, R. E.** 1968. The impact of Spruce's Amazon explorations on modern phytochemical research. *Ciência e Cultura* 20:37–49.
161. **Agurell, S., B. Holmstedt, J.-E. Lindgren, and R. E. Schultes.** 1968. Identification of two new β -carboline alkaloids in South American hallucinogenic plants. *Biochem. Pharmacol.* 17:2487–2488.
162. **Schultes, R. E.** 1968. The plant kingdom and modern medicine. *The Herbalist* 18–26.
163. **Schultes, R. E., and B. Holmstedt.** 1968. De plantis toxicariis e Mundo Novo tropicale commentationes II. The vegetal ingredients of the myristicaceous snuffs of the northwest Amazon. *Rhodora* 70:113–160.
164. **Schultes, R. E.** 1968. Some aspects of Spruce's explorations on modern phytochemical research. *Rhodora* 70:313–339.
165. **Schultes, R. E., B. Holmstedt, and J. E. Lindgren.** 1968. De plantis toxicariis e Mundo Novo tropicale commentationes III. Phytochemical examination of Spruce's original collection of *Banisteriopsis caapi* Botanical Museum Leaflets Harvard Univ. 22:121–164.
166. **Agurell, S., B. Holmstedt, J.-E. Lindgren, and R. E. Schultes.** 1969. Alkaloids in certain species of *Virola* and other South American plants of ethnopharmacologic interest. *Acta Chem. Scand.* 23:903–916.
167. **Schultes, R. E.** 1969. Hallucinogens of plant origin. *Science* 245–254. Reprinted 1969 in *Perspectives on drugs and drug usage*, issue 2 32–41. Reprinted 1971 in (Eds. G. E. Nelson and J. D. Ray, Jr) *Biologic readings for today's students*, John Wiley and Sons, Inc., New York 80–93.
168. **Schultes, R. E.** 1969. The unfolding panorama of the New World hallucinogens. *In* (Ed. J. E. Gunkel) *Current topics in plant science*, Academic Press, New York 336–354.
169. **Schultes, R. E.** 1969. (Foreword to) F. C. Seymour, *Flora of New England*. Charles E. Tuttle Co., Inc., Rutland, Vt. xi.
170. **Schultes, R. E.** 1969. The plant kingdom and hallucinogens. *Bull. and Narcotics* (United Nations) 21(2):3–16; (3):15–27. The 3rd part appeared 1970 in 22(1):25–53.
171. **Schultes, R. E.** 1969. De plantis toxicariis e Mundo Novo tropicale commentationes IV. Botanical Museum Leaflets Harvard Univ. 22:133–164.
172. **Schultes, R. E.** 1969. De plantis toxicariis e Mundo Novo tropicale commentationes V *Virola* as an orally administered hallucinogen. Botanical Museum Leaf. Harvard Univ. 22:229–240.
173. **Schultes, R. E.** 1970. The botanical and chemical distribution of hallucinogens. *Ann. Rev. Pl. Physiol.* 21:571–598.
174. **Schultes, R. E.** 1970. Random thoughts and queries on the botany of *Cannabis*. *In* (Eds. C. R. B. Joyce and S. H. Curry) *The botany and chemistry of Cannabis*. J., and A. Churchill, London 11–38.
175. **Schultes, R. E.** 1970. The New World Indians and their hallucinogenic plants. *Morris Arb. Bull.* 21:3–14.
176. **Schultes, R. E.** 1970. De plantis toxicariis e Mundo Novo tropicale commentationes VI. Notas etnotoxicológicas acerca de la flora amazónica de Colombia. *In* Ed. J. M. Idrobo II Simpósio de la Biología Tropical Amazónica 177–196.
177. **Schultes, R. E.** 1970. The history of taxonomic studies in *Hevea*. *Bot. Rev.* 36: 197–276; *in* (Eds. F. Smit and F. J. C. V. ter Lage, *Essays in biohistory and other contributions*, Int. Association for Plant Taxonomy, Utrecht, Holland 229–293.
178. **Schultes, R. E.** 1970. (Foreword to reprinted edition of) Spruce, R. (Ed. A. R. Wallace), *Notes of a botanist on the Amazon and Andes*. Johnson Reprint Corp., New York v–x.
179. **Schultes, R. E.** 1970. De plantis toxicariis e mundo novo tropicale commentationes VII. Several ethnotoxicological notes from the Colombian Amazon (poisonous plants). Harvard Univ. Botanical Museum Leaflets 22(10):345–351.
180. **Schultes, R. E.** 1970. The history of taxonomic studies in *Hevea*. *Regnum veg.* 71: 229–293.
181. **Schultes, R. E., and B. Holmstedt.** 1971. De plantis toxicariis e Mundo Novo tropicale commentationes VIII. Miscellaneous

- notes on myristicaceous plants of South America. *Lloydia* 34:61–78.
182. **Schultes, R. E.** 1971. Charles Schweinfurth 1890–1970: an appreciation. Harvard Univ. Botanical Museum Leaflets 23(2): 93–95, 97, 99.
183. **Schultes, R. E., and J. Cuatrecasas.** 1972. A new species of ichthyotoxic plant from the Amazon. (*Patinoa ichthyotoxica*). Botanical Museum Leaflets, Harvard Univ. 23(3):129–136.
184. **Schultes, R. E.** 1972. New data on the malpighiaceae narcotics of South America. Botanical Museum Leaflets, Harvard Univ. 23(3):137–147.
185. **Schultes, R. E.** 1972 *Ilex Guayusa* from 500 A.D. to the present. *Ethnolog. Studier* 32:115–138.
186. **Schultes, R. E.** 1972. The future of plants as sources of new biodynamic compounds. In (Ed. T. Swain), *Plants in the development of modern medicine*. Harvard Univ. Press, Cambridge, Mass. 103–124.
187. **Schultes, R. E.** 1972. From witch doctor to modern medicine: searching the American tropics for potentially new medicinal plants. *Arnoldia* 32:198–219.
188. **Schultes, R. E.** 1972. The utilization of hallucinogens in primitive societies—use, misuses or abuse. Pp. 17–26. In *Drug abuse, current concepts and research* (Ed. W. Keup).
189. **Schultes, R. E.** 1972. An overview of hallucinogens in the Western Hemisphere. In (Ed. P. T. Furst), *Flesh of the gods*. Praeger Publishers, New York 3–54.
190. **Schultes, R. E.** 1972. (Foreword to) Escobar, N. A., *Flora Tóxica de Panama*. Editorial Universitaria, Panama 7–8.
191. **Schultes, R. E.** 1972. De plantis toxicariis e Mundo Novo tropicale commentationes XI. The ethnotoxicological significance of additives to New World hallucinogens. *Plant Sci. Bull.* 18:34–40.
192. **Schultes, R. E.** 1972. Plant hallucinogens. In (Ed.) V. Snieckus, *Drugs and society*. Dept. Chemistry, University of Waterloo, Waterloo, Ont. 3–15.
193. **Schultes, R. E.** 1972. *Quararibea funebris*: A curious spice for chocolate drinks. *Bull. Hort. Soc. New York* 3(4):3–4.
194. **Stout, G. H., and R. E. Schultes.** 1973. The importance of plant chemicals in human affairs. In (Ed.) L. P. Miller, *Phytochemistry*. Van Nostrand Reinhold Co., New York 3: Chapter 14, 381–399.
195. **Schultes, R. E.** 1973. (Foreword to) S. von R. Altschul, *Drugs and foods from little known plants—notes in the Harvard University Herbaria*. Harvard Univ. Press, Cambridge, Mass. xi–xii.
196. **Schultes, R. E.** 1973. Tropical American hallucinogens—where are we and where are we going? *Ciência e Cultura* 25:543–561.
197. **Schultes, R. E.** 1973. Man and marijuana. *Natural History* 82(7):59–63, 80–81.
198. **Schultes, R. E.** 1973. Orchids and human affairs: what of the future? *American Orchid Society Bull.* 42:785–787.
199. **Schultes, R. E.** 1973. Orchids and human affairs: what of the future? *An. Conf. Mundial Orquideologia* 309–313.
200. **Schultes, R. E.** 1973. (Introduction to) H. Schleiffer, *Sacred narcotic plants of the New World Indians*. Hafner Press, New York 3–5.
201. **Schultes, R. E.** 1973. Alucinógenos tropicales americanos. In *Primeras Jornadas Peruanas de Fitoquímica*, Soc. Quim. Peruana 231–247.
202. **Schultes, R. E.** 1974. Palms and religion in the northwest Amazon. *Principes* 18:3–21.
203. **Schultes, R. E. W. Klein, and T. Plowman.** 1974. *Cannabis*: an example of taxonomic neglect. Botanical Museum Leaflets Harvard Univ. 23:337–367.
204. **Schultes, R. E.** 1975. Present knowledge of hallucinogenically used plants: a tabular study. In (Ed.) V. C. Runeckles, *Recent advances in phytochemistry*. Plenum Press, New York 9:1–28.
205. **Schultes, R. E.** 1975. Hallucinogenic plants as mind-altering drugs in aboriginal American societies. In *Altered states of consciousness*. Drug Abuse Council, Inc., Washington, D.C. 193–206.
206. **Schultes, R. E.** 1975. De plantis toxicariis e Mundo Novo tropicale commentationes XII. Notes on biodynamic piperaceous plants. *Rhodora* 77:165–170.
207. **Schultes, R. E., W. M. Klein, T. Plowman, and T. E. Lockwood.** 1975. *Cannabis*: an example of taxonomic neglect. In

- (Ed. V. Rubin) *Cannabis* and culture. Mouton Publishers, The Hague 21–38.
208. **Schultes, R. E.** 1975. (Introduction to) G. Reichel-Dolmatoff, The shaman and the jaguar. Temple Univ. Press, Philadelphia xi–xiv.
209. **Schultes, R. E.** 1975. De plantis toxicariis e Mundo Novo tropicale commentationes XIII. Poisonous or malpighiaceae species of the Amazon (Malpighiaceae). Botanical Museum Leaflets Harvard Univ. 24(6): 121–131.
210. **Schultes, R. E.** 1975. Present knowledge of hallucinogenically used plants: a tabular study. Recent Adv. Phytochem. 9:1–28. Ref.
211. **Schultes, R. E.** 1976. Indole alkaloids in plant hallucinogens. *Planta Medica* 29: 330–342. 1976 *Journ. Psyched. Drugs* 8: 7–25.
212. **Schultes, R. E., and T. Swain.** 1976. De plantis toxicariis e Mundo Novo tropicale commentationes XIII. Further notes on *Virola* as an orally administered hallucinogen. *Journ. Psyched. Drugs* 8:317–324.
213. **Schultes, R. E., and T. Swain.** 1976. The plant kingdom: a virgin field for new biodynamic constituents. In (Ed. N. Fina) *The recent chemistry of natural products, including tobacco*. Proc. 2nd Philip Morris-Science Symposium (1975), Richmond, Va. (1976) 133–171.
214. **Schultes, R. E.** 1976. Man and marijuana. In (Eds. J. J. Poggie, Jr., G. H. Pelto and P. J. Pelto) *The evolution of human adaptations*. Macmillan Publishing Co., New York 379–386.
215. **Schultes, R. E.** 1976. Rubber and man—a century of partnership. *Horticulture* 54(12):18–26.
216. **Schultes, R. E.** 1976. The taming of wild rubber. *Horticulture* 54(11):10–21.
217. **Schultes, R. E.** 1976. Richard Spruce and the ethnobotany of the northwest Amazon. *Rhodora* 78:65–72.
218. **Schultes, R. E.** 1976. *Plantae Colombiana. XIX. E partibus amazonicis witotorum plantae fructuariae sativae novae—Original Plants of Colombia. XIX. New fruit bearing cultivated plants from the Amazon River area of the Witoto tribe (Macoubea witotorum, Inga chorrerana)*. Botanical Museum Leaflets Harvard Univ. 24(8):193–204. Map.
219. **Schultes, R. E.** 1977. The botanical and chemical distribution of hallucinogens. In (Ed. B. M. du Toit) *Drugs, rituals and altered states of consciousness*. A. A. Balkema, Rotterdam 25–55.
220. **Schultes, R. E.** 1977. Avenues for future ethnobotanical research into New World hallucinogens and their uses. In (Ed. B. M. du Toit) *Drugs, rituals and altered states of consciousness*. A. A. Balkema, Rotterdam 261–267.
221. **Schultes, R. E.** 1977. Wild rubber: an untapped source of germ plasm. *Journ. Rubb. Res. Inst. Sri Lanka* 54:227–257.
222. **Schultes, R. E.** 1977. The odyssey of the cultivated rubber tree. *Endeavour*, n.s. 1: 378–382.
223. **Schultes, R. E.** 1977. Promising structural fibre palms of the Colombian Amazon. *Principes* 21:72–92.
224. **Schultes, R. E.** 1977. A new hallucinogen from Andean Colombia: *Iochroma fuchsoides*. *Journ. Psyched. Drugs* 9:45–49.
225. **Schultes, R. E.** 1977. Diversas plantas comestiveis nativas do noroeste da Amazônia. *Acta Amazônica* 7:317–327.
226. **Schultes, R. E.** 1977. The botanical and chemical distribution of hallucinogens. *Journ. Psyched. Drugs* 9:247–263.
227. **Schultes, R. E.** 1977. Mexico and Colombia: two major centres of aboriginal use of hallucinogens. *Journ. Psyched. Drugs* 9: 173–176.
228. **Hoaglund, R. D., R. E. Schultes, and D. D. Soejarto.** 1977. Proposal for the conservation of the generic name *Saurauia* Willdenow (1801) against *Saurauja* Willdenow (1801). *Taxon* 26:147–148.
229. **Schultes, R. E.** 1977. A new infrageneric classification of *Hevea*. Botanical Museum Leaflets Harvard Univ. 25(9):243–257.
230. **Schultes, R. E.** 1977. Albert Frederick Hill (1889–1977) and economic botany (Botanists, U.S.). Botanical Museum Leaflets Harvard Univ. 25(3):91–98.
231. **Schultes, R. E.** 1977. Albert Frederick Hill (1889–1977)—and economic botany. *Economic Botany* 31(4):378–381.
232. **Schultes, R. E., B. Holmstedt, J. E. Lindgren and L. Rivier.** 1977. De plantis toxicariis e mundo novo tropicale commen-

- tationes (Comments on the toxic plants of the tropical new world). XVIII. Phytochemical examination of Spruce's ethnobotanical collection of *Anadenanthera peregrina*. Botanical Museum Leaflets Harvard Univ. 25(10):273–287.
233. **Schultes, R. E.** 1977. Defontainia: a new Andean hallucinogen. Botanical Museum Leaflets Harvard Univ. 25(3):99–104.
234. **Schultes, R. E.** 1977. Miscellaneous notes on biodynamic plants of South America (New taxa). Botanical Museum Leaflets Harvard Univ. 25(4):109–130.
235. **Schultes, R. E., T. Swain, and T. C. Plowman.** 1977. *Virola* (bark) as an oral hallucinogen among the Boras of Peru. Botanical Museum Leaflets, Harvard Univ. 25(9):259–272.
236. **Schultes, R. E.** 1978. Richard Spruce still lives. Hortulus Aliquando 3:13–47.
237. **Schultes, R. E.** 1978. Plants and plant constituents as mind-altering agents throughout history. In L. L. Iversen, S. D. Iversen and S. H. Synder (eds.) Handbook of psychopharmacology. Plenum Publishing Co., New York 11: Chapter 5, 219–241.
238. **Schultes, R. E.** 1978. Ethnopharmacological significance of psychotropic drugs of vegetal origin. In (Eds. W. G. Clark and J. del Giudice) Principles of psychopharmacology. Academic Press, New York, Ed. 2: 41–70.
239. **Schultes, R. E.** 1978. Evolution of the identification of the sacred hallucinogenic mushrooms of Mexico. In (Eds. J. Ott and J. Bigwood) Teonanactl: Hallucinogenic mushrooms of North America. Madrona Publishers, Inc., Seattle, WA. 26–41.
240. **Schultes, R. E.** 1978. (Foreword to) E. S. Ayensu, Medicinal plants of West Africa. Michigan Reference Publ., Algonac, Mich. 10–13.
242. **Schultes, R. E.** 1978. Richard Spruce and the potential for European settlement of the Amazon—an unpublished letter. Botanical Journal of the Linnean Society 77: 131–139.
243. **Schultes, R. E.** 1978. An unpublished letter by Richard Spruce on the theory of evolution. Biological Journal of the Linnean Society 10:159–161.
244. **Schultes, R. E.** 1978. Pengembaraan dari pada pohon karet yang diusahakan. Menara Perkebunan 46(4):155–161.
245. **Schultes, R. E.** 1978. The kingdom of plants; what are healing plants? The size of the plant kingdom; Active principles in healing plants; The importance of herbaria, botanical gardens and exploration; Plants as chemical factories; The future of plants in medicine. In (Ed. W. A. R. Thomson) Medicines from the earth. McGraw-Hill Book Co., New York (1978) 7–16. 1980 Republished in: Guia Practica Ilustrada de las Plantas Medicinales. Editorial Blume, Barcelona.
246. **Schultes, R. E.** 1978. Vom Dschungelbaum zum Gummilieferanten. In Neue Zürcher Zeitung, 188:47.
247. **Schultes, R. E.** 1978. Phytochemical gaps in our knowledge of hallucinogens. (Eds. L. Reimbold, J. B. Harbourne and T. Swain). In Progress in phytochemistry 7: 301–331.
248. **Schultes, R. E.** 1978. (Foreword to) H. A. Hansen, The witch's garden. Unity Press-Michel Kesend, Santa Cruz, California ix–xii.
249. **Schultes, R. E.** 1978. Richard Spruce and the potential for European settlement of the Amazon: an unpublished letter. Bot. Journ. Linn. Soc. 77(2):131–139.
250. **Schultes, R. E.** 1979. Solanaceous hallucinogens and their role in the development of New World cultures. In (Eds. J. G. Hawkes, R. N. Lester and A. D. Skelding). The biology and chemistry of the Solanaceae. Academic Press, London 137–160.
251. **Schultes, R. E.** 1979. Índícios da riqueza etnofarmacológica do noroeste da Amazônia. Acta Amazônica 9:209–215.
252. **Schultes, R. E.** 1979. Hallucinogenic plants—their earliest botanical descriptions. Journ. Psyched. Drugs 11:13–24.
253. **Schultes, R. E.** 1979. Evolution of the identification of the major South American narcotic plants. Journ. Psyched. Drugs 11: 119–134.
254. **Schultes, R. E.** 1979. Rubber. Malayan Naturalist 25–27.
255. **Holmstedt, B., S. H. Wassen and R. E. Schultes.** 1979. Jaborandi—an interdisciplinary appraisal. Journal of Ethnopharmacology 1:2–21.
256. **Schultes, R. E.** 1979. De plantis toxicariis

- e Mundo Novo tropicale commentationes XX. Medicinal and toxic uses of *Swartzia* in the northwest Amazon. *Journal of Ethnopharmacology* 1:78–87.
257. **Schultes, R. E.** 1979. De plantis toxicariis e Mundo Novo tropicale commentationes XXI. Interesting native uses of the Humiriaceae in the northwest Amazon. *Journal of Ethnopharmacology* 1:89–94.
258. **Schultes, R. E.** 1979. De plantis toxicariis e Mundo Novo tropicale commentationes XIX. Biodynamic apocynaceous plants of the northwest Amazon. *Journal of Ethnopharmacology* 1:165–192.
259. **Schultes, R. E.** 1979. Evolution of the identification of the myristicaceous hallucinogens of South America. *Journal of Ethnopharmacology* 1:211–239.
260. **Schultes, R. E.** 1979. La Amazonia como fuente de nuevas plantas económicas. In *Seminário sobre los Recursos Naturales Renovables y el Desarrollo Regional Amazónico*, IICA Bogotá 200–211.
261. **Schultes, R. E.** 1979. The Amazonia as a source of new economic plants. *Economic Botany* 33:259–266.
262. **Schultes, R. E.** 1979. De plantis toxicariis e mundo novo tropicale commentationes XXV. Biodynamic Acanthaceous plants of the northwest Amazon. *Botanical Museum Leaflets Harvard Univ.* 26(8):267–275.
263. **Schultes, R. E.** 1979. Discovery of an ancient guayusa plantation in Colombia. *Botanical Museum Leaflets Harvard Univ.* 27(5/6):143–153.
264. **Schultes, R. E., and A. Bright.** 1979. Ancient gold pectorals from Colombia: mushroom effigies? *Botanical Museum Leaflets Harvard Univ.* 27(5/6):113–141.
265. **Schultes, R. E., and H. Schleiffer.** 1979. (Introduction to) Narcotic plants of the Old World used in rituals and everyday life: an anthology of texts from ancient times to the present/selected, translated and edited by H. Schleiffer. *Lubrecht and Cramer*. 193 p.
266. **Schultes, R. E.** 1980. The plant kingdom as a source of new medicines. *The Longwood program seminars* 12:2–8.
267. **Schultes, R. E.** 1981. (Foreword to) S. K. Jain, *Glimpses of Indian ethnobotany*. Oxford and IBH Publishing Co., New Delhi v–vi.
268. **Schultes, R. E.** 1981. (Foreword to) R. C. Clarke, *Marijuana botany*. And/Or Press, Berkeley, California ix.
269. **Schultes, R. E., and A. Bright.** 1981. Ancient gold pectorals from Colombia: mushroom effigies? Reprinted in *Sweat of the sun, tears of the moon—gold and emerald treasures of Colombia*. Natural History Museum of Los Angeles County, Los Angeles, Cal. 37–43.
270. **Schultes, R. E.** 1981. Coca in the northwest Amazon. *Journal of Ethnopharmacology* 3:173–194.
271. **Butler, E. G., T. Robinson, and R. E. Schultes.** 1981. *Petunia violaceae*: hallucinogen or not?. *Journal of Ethnopharmacology* 4:111–114.
272. **Schultes, R. E.** 1981. (Introduction to) Krok Foundation, *Medical Research Programs. Ethnopharmacology—its importance to modern medicine*. Krok Foundation, Santa Unez, Calif.
273. **Schultes, R. E.** 1981. Einführung in die Botanik der wichtigsten pflanzlichen Drogen. In (Eds. G. Völger et al.) *Rausch und Realität—Drogen im Kulturvergleich* 1: 28–41. *Rautenstrauch—Joest—Museums*, Cologne, Germany.
274. **Schultes, R. E.** 1981. Iconography of New World plant hallucinogens 41(3):80–125.
275. **Zimmerman, M. R., E. Trinkaus, M. LeMay, A. C. Aufderheide, T. A. Reyman, G. R. Marrocco, R. W. Ortel, J. T. Benitez, W. S. Laughlin, P. D. Horne, R. E. Schultes, and E. A. Coughlin.** 1981. *Arch Pathol Lab Med.* 105(12):638–41.
276. **Schultes, R. E.** 1981. Progress in phytochemistry. *Progress in Phytochemistry* 7: 301–330.
277. **Schultes, R. E.** 1982 The beta-carboline hallucinogens of South America. *Journ. Psychoactive Drugs* 14:205–220.
278. **Schultes, R. E., and W. A. Davis.** 1982. The glass flowers at Harvard. *Garden* 6(4): 15–21.
279. **Schultes, R. E., and W. A. Davis.** 1982. Glass flowers bloom forever in unique Harvard collection. *Smithsonian* 13(7): 100–107.
280. **Fernandez-Perez, A., and R. E. Schultes.** 1983. Colombia: centro mundial para el estudio de plantas alucinantes. *Prociencia*:

- Recursos Biologicos Nuevos (Bogotá) 6: 78–82.
281. **Schultes, R. E.** 1983. Richard Spruce: an early ethnobotanist and explorer of the northwest Amazon and northern Andes. *Journ. Ethnobiol.* 3:139–147.
282. **Schultes, R. E.** 1983. Peruvian and Chilean psychoactive plants mentioned in Ruiz' *Relación* (1777–1788). *Journ. Psychoactive Drugs* 15:303–312.
283. **Plotkin, M. J., and R. E. Schultes.** 1983. Tropical forests as sources of new biodynamic compounds. *Environmental Awareness* 6:9–10.
284. **Schultes, R. E.** 1983. Botanical Museums and gardens and their role in conservation of germplasm. *Porim Occ. Papers*, No. 7, Palm Oil Research Institute of Malaysia 1–19.
285. **Schultes, R. E.** 1983. La Amazonia como fuente de nuevas plantas economicas. *Prociencia* 6:67–77.
286. **Schultes, R. E.** 1983. Colombia—centro mundial para el estudio de plantas alucinantes. *Prociencia* 6:78–82.
287. **Schultes, R. E.** 1983. De plantis toxicariis e Mundo Novo tropicale commentationes. XXXI. Further ethnopharmacological notes on malpighiaceae plants of the northwestern Amazon (List of species, uses). *Botanical Museum Leaflets Harvard Univ.* 29(2):133–137.
288. **Schultes, R. E.** 1983. De plantis toxicariis e Mundo Novo tropicale commentationes. XXXII. Notes, primary of field tests and native nomenclature, on biodynamic plants of the northwest Amazon. *Botanical Museum Leaflets Harvard Univ.* 29(3):251–272.
289. **Schultes, R. E.** 1983. De plantis toxicariis e Mundo Novo tropicales. Commentationes. XXXIII. Ethnobotanical, floristic and nomenclatural notes on plants of the northwest Amazon (Colombia). *Botanical Museum Leaflets Harvard Univ.* 29(4):343–365.
290. **Schultes, R. E.** 1983. Gordon Winston Dillon 1912–1982: an appreciation (Botanists, USA). *Botanical Museum Leaflets Harvard Univ.* 29(2):69–76.
291. **Schultes, R. E.** 1984. The tree that changed the world in one century. *Arnoldia* 44(2):2–16.
292. **Schultes, R. E.** 1984. (Prologo) Programa Interamericana de Recursos Biológicos (PIRB) 7–10.
293. **Schultes, R. E.** 1984. Psychoactive plants in need of chemical and pharmacological study. *In* 50th Golden Jubilee Number, Proceedings, Plant Sciences, Indian Academy of Sciences, Bangalore 93(3):281–304.
294. **Schultes, R. E.** 1984. Remarks on Andean orchids by the Spanish botanical explorer Hipolito Ruiz. *American Orchid Society Bull.* 53:842–843.
295. **Schultes, R. E.** 1984. (Prologo) Programa Interamericana de Recursos Biológicos (PIRB). Asociación Interciencia—Asociación Colombiana para el Avance de la Ciencia, Bogotá 5–8.
296. **Schultes, R. E.** 1984. (Foreword to) Stewart, O. C., and D. F. Aberle. *Peyotism in the West.* University of Utah Press, Salt Lake City, Utah vii–viii.
297. **Schultes, R. E.** 1984. Fifteen years of study of psychoactive snuffs of South America: 1967–1982—a review. *Journal of Ethnopharmacology* 11:17–32.
298. **Schultes, R. E.** 1984. Amazonian Cultigens and their northward and westward migration in pre-Colombian times. Stone, D. (Ed.) *Papers of the Peabody Museum of Archaeology and Ethnology, Harvard University Cambridge, MA.* 76:20–36.
299. **Schultes, R. E., and H. García-Barriga.** 1984. A new species of *Prunus* from Colombia. *Botanical Museum Leaflets Harvard Univ.* 30(2):91–93.
300. **Schultes, R. E.** 1984. The Botanical Museum of Harvard University in its 125th year, 1858–1983. *Botanical Museum Leaflets Harvard Univ.* 30(1):1–12.
301. **Schultes, R. E.** 1984. The tree that changed the world in one century (*Hevea*, history, rubber plantations and industry). *Arnoldia* 44(2):2–16.
302. **Schultes, R. E.** 1985. Conservation looks to the medicine man. *Interciencia* 10(5):248–251.
303. **Schultes, R. E.** 1985. Several unpublished ethnobotanical notes of Richard Spruce. *Rhodora* 87:439–441.
304. **Schultes, R. E.** 1985. (Foreword to) Pesce, C. (transl. and ed. D. V. Johnson) *Oil palms and other oilseeds of the Amazon.*

- Reference Publications, Inc., Algonac, Michigan 5–7.
- 305. Lloyd, H.A., H.M. Fales, M.E. Goldman, D.M. Jerina, T. Plowman, and R. E. Schultes.** 1985. Brunfelsamidine: a novel convulsant from the medicinal plant *Brunfelsia grandiflora*. *Tetrahedron letters* 26(22):2623–2624.
- 306. Schultes, R. E.** 1985. De plantis toxicariis e mundo novo tropicale commentationes. XXXVI. A novel method of utilizing the hallucinogenic *Banisteriopsis*. *Botanical Museum Leaflets Harvard Univ.* 30(3):61–63.
- 307. Schultes, R. E.** 1985. De plantis toxicariis e mundo novo tropicale commentationes XXXIV: biodynamic rubiaceous plants of the northwest Amazon. *Journal of Ethnopharmacology* 14(2/3):105–124.
- 308. Schultes, R. E.** 1985. De plantis toxicariis e mundo novo tropicale commentationes XXXV: miscellaneous notes on biodynamic plants of the northwest Amazon. *Journal of Ethnopharmacology* 14(2/3):125–158.
- 309. Schultes, R. E.** 1986. Editorial. *Boletín Informativo—Recursos Biológicos Nuevos*, PIRB no. 4, 1.
- 310. Castillo R., and R. E. Schultes.** 1986. New combinations in the Solanaceae. *Rhodora* 88:291–292.
- 311. Schultes, R. E.** 1986. Algunos apuntes botánicos sobre las Passifloras in II. Mesa Redonda de la Red Latino—Americana de la Industria de Frutas Tropicales. Federación Nac. de Cafeteros y Oficina Regional de la Foro para America Latina y el Caribe, Bogotá 253–255.
- 312. Schultes, R. E.** 1986. “El desarrollo histórico de la identificación de las malpighiaceas empleadas como alucinógenos.” *America Indígena* 46:9–47.
- 313. Schultes, R. E.** 1986. Recognition of variability in wild plants by Indians of the northwest Amazon: an enigma. *Journ Ethnobiology* 6:229–38.
- 314. Schultes, R. E.** 1986. Conservation of plant lore in the Amazon Basin. *Arnoldia*, 46(4):52–59.
- 315. Schultes, R. E.** 1986. Reminiscences of seventeen years of a rewarding experience. *Economic Botany* 40(1):20–33.
- 316. Schultes, R. E., and R. F. Raffauf.** 1986. De Plantis Toxicariis e mundo novo tropicale commentationes. XXXVIII. Ethnopharmacological and alkaloidal notes on plants of the northwest Amazon. *Caldasia* 15(71/75):331–363.
- 317. Schultes, R. E.** 1987. The medicine man: herbalist superb. *The Herbalist* 53:1–5.
- 318. Schultes, R. E.** 1987. Coca and other psychoactive plants: Magico-religious roles in primitive societies of the New World. Pages 212–249 in Fisher, S. et al. (eds.), *Cocaine: clinical and biobehavioral aspects*. New York, NY, US: Oxford University Press, ix, 256 pp.
- 319. Schultes, R. E.** 1987. Members of Euphorbiaceae in primitive and advanced societies. *Journ. Linn. Soc., Bot.* 95(1/2):79–95.
- 320. Schultes, R. E.** 1987. Studies in the genus *Hevea*. VIII. Notes on infraspecific variants of *Hevea brasiliensis* (Euphorbiaceae). *Economic Botany*, 41(2):125–147.
- 321. Schultes, R. E.** 1987. The strange activity of *Malouetia tamaquarina* (Apocynaceae), a toxic Amazonian plant. *Economic Botany* 41(2):324–325.
- 322. Schultes, R. E.** 1987. Still another unpublished letter from Spruce on evolution. *Rhodora* 89:101–106.
- 323. Schultes, R. E.** 1987. A botanical enigma in the Amazon. *Economic Botany* 41(3):454–456.
- 324. Schultes, R. E.** 1987. Little-known cultivated plants of the Colombian Amazonia. *Economic Botany* 41(3):446–450.
- 325. Schultes, R. E.** 1987. A caffeine drink prepared from bark. *Economic Botany* 41(4):526–527.
- 326. Schultes, R. E.** 1988. Ethnopharmacological conservation: a key to progress in medicine. *Acta Amazonica, Supl.* 18(1–2):393–406.
- 327. Neumeyer, J. L., R. E. Schultes, J. D. Musto, and L. Woodland.** 1988. Evaluation of chemical tests on vouchered specimens of *Cannabis*. *Psychoactive Drugs* 20(4):459–62.
- 328. Sledge, W. A., and R. E. Schultes.** 1988. Richard Spruce: a multi-talented botanist. *Journ. Ethnobiol.*, pp. 7–12.
- 329. Schultes, R. E.** 1988. Ethnopharmacological conservation: a key to progress in medicine. *Acta Amazonica, Supl.* 18(1/2):393–406.

330. **Schultes, R. E.** 1989. *Calathea lutea* (Marantaceae), a potential domesticate and source of high-grade wax. *Economic Botany* 43(4):509–510.
331. **Schultes, R. E.** 1989. Seje: an oil-rich palm for domestication. *Elaeis* 1(2):126–131.
332. **Schultes, R. E.** 1989. *Pouteria ucuqui* (Sapotaceae), a little-known Amazonian fruit tree worthy of domestication. *Economic Botany* 43(1):125–127.
333. **Holmstedt, B., and R. E. Schultes.** 1989. Inebriantia: an early interdisciplinary consideration of intoxicants and their effects on man. *Bot. Journ. Linn. Soc.* 101(2):181–198.
334. **Schultes, R. E.** 1990. De Plantis Toxicariis e mundo novo tropicale commentationes. XXXVI. *Justicia* (Acanthaceae) as a source of an hallucinogenic snuff. *Economic Botany* 44(1):61–70.
335. **Schultes, R. E., and R. F. Raffauf.** 1990. Field notes on curare constituents in the northwest Amazonia. *Curare* 13:105–20.
336. **Schultes, R. E.** 1990. How I met C. Earle Smith. *Journal Ethnobiology* 10:1–21.
337. **Plotkin, M. J., and R. E. Schultes.** 1990. *Virola*: a promising genus for ethnopharmacological investigation. *Psychoactive Drugs* 22(3):357–61.
338. **Schultes, R. E.** 1990. A brief taxonomic view of the genus *Hevea*. Schultes, R. E., MRRDB Monograph, -0127-7782; no. 14 viii, 57 p.
339. **Smith, N. J. H., and R. E. Schultes.** 1990. Amazonia's rich storehouse of genes vital for improving food and cash crops. *Environmental Conservation* 17(2):103–104.
340. **Smith, N. J. H., and R. E. Schultes.** 1990. Deforestation and shrinking crop gene-pools in Amazonia. *Environmental Conservation* 17(3):227–234.
341. **Schultes, R. E.** 1990. Gifts of the Amazon flora to the world. *Arnoldia* 50(2):21–34.
342. **Cook, A. G., A. C. Janetos, W. T. Hinds, P. M. Fearnside, N. J. H. Smith, R. E. Schultes, A. C. Smiet, and L. Hannah.** 1990. Stressing tropical deforestation. *Environmental Conservation* 17(3):201–244.
343. **Schultes, R. E.** 1990. Medicinal orchids of the Indians of the Colombian Amazon. *American Orchid Society Bull.* 59(2):159–161.
344. **Schultes, R. E.** 1990. Notes on the difficulties experienced by Spruce in his collecting. *Rhodora* 92(869):42–44.
345. **Schultes, R. E.** 1990. Taxonomic, nomenclatural and ethnobotanic notes on *Elaeis*. *Elaeis* 2(1):172–187.
346. **Schultes, R. E.** 1991. Ethnobotanical conservation and plant diversity in the northwest Amazon. *Diversity* 7(1/2):69–72.
347. **Schultes, R. E., and R. F. Raffauf.** 1992. A rare report of an intoxicating snuff from the Amazon. *Kew Bulletin* 47(4):743–744.
348. **Schultes, R. E.** 1993. The domestication of the rubber tree: economic and sociological implications. *American Journal Economic Sociology* 52(4):479–485.
349. **Schultes, R. E.** 1993. Orchids galore. *American Orchid Society Bulletin* 62(4):398–400.
350. **Schultes, R. E., and R. F. Raffauf.** 1993. De Plantis Toxicariis e Mundo Novo tropicale commentationes. XL. Sundry notes on medicinal or toxic plants of the northwest Amazon. *Harvard Papers in Botany* 4:31–42.
351. **Schultes, R. E.** 1993. Plants in treating senile dementia in the northwest Amazon. *Journal of Ethnopharmacology* 38(2/3):129–135.
352. **Schultes, R. E.** 1994. Amazonian ethnobotany and the search for new drugs. *Ciba Found. Symp.*, 185(-AA-):106–12; discussion 112–5.
353. **Schultes, R. E., and R. F. Raffauf.** 1994. De Plantis Toxicariis e Mundo Novo Tropicale Commentationes. XXXIX. Febrifugers of northwest Amazonia. *Harvard Papers in Botany* 5:52–68.
354. **Madriñán, S., and R. E. Schultes.** 1995. Colombia's national tree: the wax palm *Ceroxylon quindiuense* and its relatives. *Elaeis* 7(1):35–56.
355. **Schultes, R. E.** 1997. The importance of ethnobotany in environmental conservation. *American Journal of Economics and Sociology* 53(2):202–206.