
Ted E. Bunch

Biographical Summary

Dr. Bunch received BA and MS degrees in Geology from Miami University, Oxford Ohio and a PhD from the University of Pittsburgh, Department of Space Sciences. He has over fifty years of research experience in the investigations of experimentally and naturally shocked materials, asteroid impact craters, Apollo lunar samples, terrestrial mineralogy and petrology, meteorites, origin of life, space habitation osteoporosis, exobiology, space environment hazards, and interplanetary dust particles.

During his last ten years at NASA, he developed hypervelocity impact techniques for the Ames Vertical Gun hypervelocity impact experiments on meteorites, carbonaceous materials, and aerogel cosmic particle collectors, in addition to characterizations of Martian, Lunar, and asteroid meteorites.

He has published over 280 peer reviewed research reports, book chapters, and articles including 98 papers on meteorites, 78 on impact craters and hypervelocity collisions, 44 on the Moon and Mars, and 38 on terrestrial geology.

He received NASA's Exceptional Scientific Achievement Medal, among other awards, in recognition of his accomplishments. He is a Fellow in two professional scientific societies, a National Science Foundation Research Fellow, and a NASA-Ames Associate Fellow. Asteroid 7326 TedBunch (1981 UK22) was named after him in recognition of his space science achievements. He recently received the James M. DuPont Research Award for 2013.

He retired from NASA Ames Research Center in 2001 as Chief of Exobiology. He is presently a Professor of Geology (Adjunct) at Northern Arizona University, founder and CEO of Space Sciences Consulting Services, and a Research Associate of the Royal Ontario Museum, Canada.

Selected Publications

- Kinzie, C.A., Que Hee, S.S, Stich, A., Tague, K.A., Mercer, C., Razink, J.J., Kennett, D.J., DeCarli, P.S., **Bunch, T.E.**, Wittke, J.H., Israde-Alcántara, I., Bischoff, J.L., Goodyear, A.C., Tankersley, K.B., Kimbel, D.R., Culleton, B.J., Erlandson, J.M., Stafford, T.W., Kloosterman, J.B., Moore, A.M.T., Firestone, R.B., Aura Tortosa, J.E., Jordá Pardo, F.J., West, A., Kennett, J.P., and Wolbach, W.S., 2014, Nanodiamond-rich layer across three continents consistent with major cosmic impact at 12,800 cal BP: *Journal of Geology*, v. 122, No. 5, pp. 475-506.
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- Wittke, J.H., **Bunch, T.E.**, Kennett, J.P., Kennett, D.J., Culleton, B.J., Tankersley, K.B., Daniel, I.R. Jr., Kloosterman, J.B., Kletetschka, G., West, A., and Firestone, R.B., 2013, Reply to van Hoesel et al.: Impact-related Younger Dryas boundary nanodiamonds from The Netherlands: *Proceedings of the National Academy of Science*, v. 110 (41), E3897-3898.

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- **Bunch, T.E.**, Hermes, R.E., Moore, A.M.T., Kennett, D.K., Weaver, J.C., Wittke, J.H., DeCarli, P.S., Bischoff, J.L., Hillman, G.C. , Howard, G.A., Kimbel, D.R., Kletetschka, G., Lipo, C.P., Sakai, S., Revay, Z., West, A., Firestone, R.B. and Kennett, J.P., 2012, Very high-temperature impact melt products as evidence for cosmic airbursts and impacts 12,900 years ago: *Proceedings of the National Academy of Sciences*, 109 (28) E1903-E1912.
- Israde-Alcántara, I., Bischoff, J.L., Dominguez-Vázquez, G., Li, H.-C., DeCarli, P.S., **Bunch, T.E.**, Wittke, J.H., Weaver, J.C., Firestone, R.B., West, A., Kennett, J.P., Mercer, C., Xie, S., Richman, E.K., Kinzie, C.R., and Wolbach, W.S., 2012, Evidence from central Mexico supporting the Younger Dryas extraterrestrial impact hypothesis: *Proceedings of the National Academy of Sciences*, vol. 109, issue, 13, pp. E738-E747.
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