1. Record Nr. UNINA9910254582103321 Autore Stevenson David S Titolo The Nature of Life and Its Potential to Survive [[electronic resource] /] / by David S. Stevenson Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2017 **ISBN** 3-319-52911-0 Edizione [1st ed. 2017.] Descrizione fisica 1 online resource (XV, 456 p. 70 illus., 69 illus. in color.) Collana Astronomers' Universe, , 1614-659X 520 Disciplina Soggetti Astronomy Astrobiology **Evolutionary biology Planetology** Popular Science in Astronomy **Evolutionary Biology** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references at the end of each chapters and Nota di bibliografia index. Nota di contenuto Preface -- Chapter 1 – What is Life? -- Chapter 2 – Life's Grand Themes -- Chapter 3 - The Origin of Life on Earth -- Chapter 4 - Life as the Evolution of Information -- Chapter 5 - Life Jim, But Not as We Know It -- Chapter 6 - Extinction -- Chapter 7- Agents of Mass Destruction --Chapter 8 - Ultimately, Can Life Survive? -- Chapter 9 - A Thesis on Life, the Universe and Almost Everything Else -- Glossary -- Index. This book looks at the persistence of life and how difficult it would be Sommario/riassunto to annihilate life, especially a species as successful as humanity. The idea that life in general is fragile is challenged by the hardiness of microbes, which shows that astrobiology on exoplanets and other satellites must be robust and plentiful. Microbes have adapted to virtually every niche on the planet, from the deep, hot biosphere, to the frigid heights of the upper troposphere. Life, it seems, is almost indestructible. The chapters in this work examine the various scenarios that might lead to the extermination of life, and why they will almost

always fail. Life's highly adaptive nature ensures that it will cling on no

matter how difficult the circumstances. Scientists are increasingly probing and questioning life's true limits in, on and above the Earth, and how these limits could be pushed elsewhere in the universe. This investigation puts life in its true astronomical context, with the reader taken on a journey to illustrate life's potential and perseverance.