



## The Glory in Creation: Valuing Biodiversity

By Rabbi Shaul David Judelman

According to the Talmudic sage Rav, “Of all the things that the Holy One, Blessed be He created in this world, nothing was created without a purpose.”<sup>1</sup> All creatures from humans to mice to rivers to sand are seen as a manifestation of G-d’s wisdom and glory.<sup>2</sup> As Chief Rabbi Jonathan Sacks teaches, “the unity of God is to be found in the diversity of creation.”<sup>3</sup>

We live in an amazingly diverse world, with approximately 8.3 million unique species described by scientists, and likely twice that number yet to be discovered.<sup>4</sup> This biodiversity is an expression of G-d’s glory, a testament to the extraordinary creativity of our Creator.

At the beginning of Genesis, the Torah describes human dominion over all things. These verses have shown themselves to be deeply prescient. Today’s modern human technological development has demonstrated this dominion to the greatest extent. The metals in our computers, the organic compounds in our medicines and even the paper in our hands are all examples of our mastery over the world.

But in addition to being used by human beings, each species also has a Divine-given purpose. For example, the Midrash (Oral tradition) teaches, “Even things which appear to you to be superfluous in this world, like flies, fleas and mosquitoes carry forth the will of the Holy One! Even the snake, the mosquito and the frogs!”<sup>5</sup>

The Jewish tradition is rich with sources indicating the importance that G-d places on the continuity of species, from the prohibition against mixing species (kilayim)<sup>6</sup> to the requirement to send away the mother bird before taking eggs (shiluach haken).<sup>7</sup> The Ramban understands the “continued existence” of creation to be a key reason for why G-d considered it “very good” on the sixth day.<sup>8</sup> In the Talmud, Rabbi Hanina bar Papa explains a verse about G-d’s great joy with the creation as stemming from the fact that even simple species seek to ensure their genetic survival (Tractate Chullin 60a).

In our times, human actions are driving a tremendous decline in biodiversity. According to the second Global Biodiversity Outlook (GBO-2) of the United Nations Environment Programme, “we are currently responsible for the sixth major extinction event in the history of the Earth, and the greatest since the dinosaurs disappeared, 65 million years ago.”<sup>9</sup> The third Global Biodiversity Outlook (GBO-3, which tracks 3,000 species), reported that amphibians are “deteriorating” in status, and nearly 25% of all plant species are estimated to be threatened

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<sup>1</sup> Babylonian Talmud, Tractate Shabbat 77b

<sup>2</sup> See Bereishit Raba 10:7

<sup>3</sup> *The Dignity of Difference*, Continuum: New York, 2003, p.53. Rabbi Sacks is Chief Rabbi of the United Hebrew Congregations of the Commonwealth, selected by the United Synagogue in Britain.

<sup>4</sup> This figure does not count the potential millions of bacterial species See “Number of species on Earth tagged at 8.7 million,” by Lee Sweetlove, 8.23.11, *Nature News*, based on a study published in PLoS Biology, online at <http://www.nature.com/news/2011/110823/full/news.2011.498.html>

<sup>5</sup> Bereishit Raba 10:7

<sup>6</sup> Leviticus 19:19

<sup>7</sup> See commentaries of Ramban and Abarbanel to Deuteronomy 22:6.

<sup>8</sup> Ramban to Genesis 1:11 The Ramban makes a similar point in his commentary to Genesis 1:4 and 1:31.

<sup>9</sup> Ibid.

with extinction. The report shows that between 1970 and 2006, the wild vertebrate species fell by an average of 31% globally, with the decline “especially severe in the tropics (59%) and in freshwater ecosystems (41%).”<sup>10</sup>

The third Global Biodiversity Outlook (GBO-3), produced in 2012, acknowledged the failure of governments to meet their 2010 target to protect biodiversity. The report warned that “there is a high risk of dramatic biodiversity loss and accompanying degradation of a broad range of ecosystem services if ecosystems are pushed beyond certain thresholds or tipping points.”<sup>11</sup>

Human welfare depends on the services provided by healthy, bio-diverse ecosystems. The effects of biodiversity loss and ecosystem disruption disproportionately impact the rural poor, who depend directly on biodiversity for a particularly high proportion of their basic needs.<sup>12</sup> But the effects of lost biodiversity will also be felt by humans in other ways, since we rely on plants and animals for food and medicine.

Over 100 pharmaceutical companies and several branches of the US government, including giants like Merck and The National Cancer Institute, engage in plant research projects for possible drugs and cures for disease. As of 1993, 25% of Western pharmaceuticals were derived from rainforest ingredients. Yet less than 1% of these tropical trees and plants had been tested by scientists.<sup>13</sup> As these species disappear, the opportunity for them to cure diseases disappears with them.

You can make a difference to protect species diversity. First, ask questions about where your wood products come from. In America, look for the Forest Stewardship Council label. If you don't see it, ask!<sup>14</sup> If you eat fish, use the Monterey Bay Aquarium's Seafood Watch to make more informed decisions.<sup>15</sup> Finally, do not buy products made from the skin, fur, bone, shell, beak or hooves of endangered species.<sup>16</sup>

In this article we have learned about G-d's intentionality behind the diversity of species in creation, and the potential medicines, insights and wonder we have yet to uncover in these species. Imitating the attributes of G-d is a central Jewish value, and we must emulate G-d's concern for the diversity of His Creation.<sup>17</sup>

We can start by better preserving, observing and appreciating the incredible creatures living alongside us. Let us emulate the Creator with our appreciation of all of the creation, and take actions now to protect biodiversity for ourselves and our fellow creatures on the planet.

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<sup>10</sup> Ibid. The Food and Agriculture Organization (FAO) estimates that 19% of marine fish stocks are overexploited, 8% are depleted or recovering from depletion, while more than half are fully exploited.

<sup>11</sup> Secretariat of the Convention on Biological Diversity (2012) Global Biodiversity Outlook 3. Montreal, 95 + vii pages, online at <http://www.cbd.int/gbo3/?pub=6667&section=6729>

<sup>12</sup> Ibid.

<sup>13</sup> From James A. Duke. “Medicinal plants and the pharmaceutical industry,” p. 664-669. In: J. Janick and J.E. Simon (eds.), *New Crops*. Wiley, New York, 1993, online at <http://www.hort.purdue.edu/newcrop/proceedings1993/v2-664.html>

<sup>14</sup> See: <http://us.fsc.org/>

<sup>15</sup> The Seafood Watch is available at <http://www.montereybayaquarium.org/cr/seafoodwatch.aspx>.

<sup>16</sup> This applies especially when buying souvenirs when travelling. See [http://wwf.panda.org/about\\_our\\_earth/biodiversity/what\\_you\\_can\\_do/](http://wwf.panda.org/about_our_earth/biodiversity/what_you_can_do/) for information on this and other ways to protect species.

<sup>17</sup> Babylonian Talmud, Tractate Sota 14a. There is a famous Midrash dealing with a conundrum presented in the verse "You, who cleaved to the Lord your G-d, are all alive today." (Deut. 4:4) After all, G-d is incorporeal- how could we be described as "cleaving" to a non-physical G-d? The Talmud answers that the intention is really that we will emulate G-d: "Rather, this means you should cleave to God's attributes. Just as God clothed the naked [Adam and Eve], so too you should cloth the naked. Just as God visited the sick [Abraham after his circumcision], so too you should visit the sick. Just as God consoled the mourners [Isaac after Abraham's death], so too you should console the mourners. Just as God buried the dead [Moses], so too you should bury the dead."

*family in Gush Etzion.*

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