

Behemoth and leviathan in the book of Job¹

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Behemoth and leviathan, the two enigmatic animals mentioned in the book of Job, are commonly equated with a hippopotamus and a crocodile, respectively. Exegesis of Job 40 and 41 indicates that a hippopotamus and a crocodile are not likely candidates for these enormous creatures described by Job. Neither should behemoth and leviathan be taken as mythological animals. After establishing their identities, I also consider to what degree they symbolize the power of evil, and whether they are connected with Satan (who is mentioned in the first two chapters of the book).

Were behemoth and leviathan real animals?

The book of Job, presumably written in the second millennium BC, details the events of the patriarchal Job in the land of Uz.² At the end of the book, in God's speech to Job, two large animals are described. The first animal is described in ten verses (40:15–24) and the second in no less than 34 verses (41:1–34). Several English translations give the Hebrew names rather than a translation: behemoth and leviathan. In the course of history, people have often questioned whether these passages describe actual animals. Various interpretations have moved between the extremes of mythical and realistic explanations. Apocalyptic and early rabbinic Judaism typically represented them from a mythical point of view, where the animals are to play a role in the future.³ In Christian circles a symbolic explanation or application has been present for a long time. Thomas Aquinas, on the other hand, equated behemoth with an elephant, and leviathan with a whale. Since Samuel Bochartus, in his *Hierozoicon* (1663), identified behemoth with the hippopotamus and leviathan with the crocodile, this has become the current consensus.

The word 'behemoth' is the plural for 'livestock' (see Gen. 2:20). This plural form is often used for beasts of the field or woods. Leviathan is mentioned once as denoting a normal sea creature (Psa. 104:26) and three times in a symbolic manner (Job 3:8; Isa. 27:1 and Psa. 74:14). While both words can be used in a variety of ways, several contextual factors in Job 40–41 favour interpreting behemoth and leviathan as two real animals that Job could have witnessed:

- The first time the Lord speaks in Job 39 He describes real animals (from which we can glean important truths about the nature of the world and the special place of mankind). In the following verses two more living animals are mentioned, which strengthens the argument that the Lord is referring to real creatures.
- Behemoth is not described as a horrible and rapacious animal, as in several creation myths. On the contrary, it is described as a grass-eating animal (Job 40:15). It lies peacefully in the shadow of the river plants (vv. 21–22).

- God does not describe past cosmic events in relation to behemoth and leviathan, but rather the appearance and habits of animals that were present. Therefore he is referring to animals that Job observed personally. Both animals are extraordinarily powerful and evoke awe.
- It is possible that some poetic licence was employed in the description of the animals, but this does not mean that Job and his friends did not observe real animals.

It is therefore plausible that the two animals indeed were real.

Behemoth (Job 40:15–24)

In chapter 40, God describes an impressive animal. It is the first or most prominent among God's works. Behemoth apparently is a masterpiece (v. 19). This description is about twice as long as that for the animals in chapter 39. Job is asked to consider behemoth⁴ that eats grass like an ox and is therefore some kind of herbivore (v. 15). Job is urged to pay attention to the power of its loins and the strength of its belly muscles (v. 16). A problem with the idea that this description refers to a hippopotamus is that in this animal the loins are not individually visible and neither are the muscles. The hippopotamus is a very thickset animal.

Behemoth can stretch its tail like a cedar.⁵ This tree is known for its size and its hard wood, which is very well suited for building. The tail thus should be strong and long. The tail of the hippopotamus has no resemblance to a mighty cedar or cedar branch at all. The short and thick tail is only 35 to 50 cm long; it is broad at its base and has a pointed end. Furthermore, the hippopotamus does not stretch its tail, but lets it hang down and wiggles it. For this reason, the translation 'to slacken' has been proposed, but this does not fit with the comparison of the tail to a cedar. The cedar has very long branches of some 10 to 20 m, so restricting the comparison to a cedar branch does not provide a solution.

Although the hippopotamus is impressive, the elephant and the rhinoceros are nevertheless larger. These animals are, together with the hippopotamus, depicted and mentioned on the so-called Black Obelisk.⁶ It seems that the hippopotamus is brought forward as a tribute (payment of a vassal), which would seem an unlikely fate for behemoth according to its

depiction here. The remainder of verse 19 can be interpreted in two ways: the creature has been given a sword by God, or it is a creature against whom only God can draw His sword. The word ‘sword’ is often taken to indicate the teeth of a hippopotamus because they can grow to lengths of ca. 50 cm and are similar in form to a scimitar (compare Prov. 30:14, and figure 1). If this is the right explanation, it seems strange that the word is used in the singular form. The possibility that the Maker approaches this animal with his sword, because people do not dare to do this, is more in line with verse 24 and with the impossibility for attacking this animal.

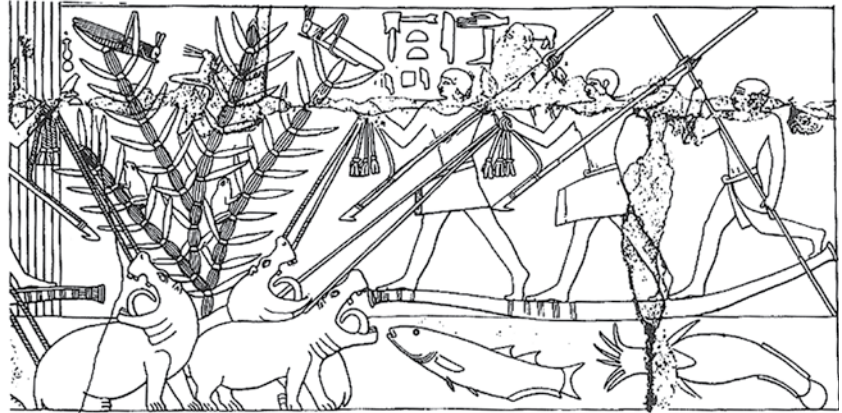


Figure 1. Hippopotamuses and Egyptian hunters (from Keel, ref. 10).

The trees it lies down under and provide it with shade (vv. 21–22) are usually identified as the *Ziziphus lotus*, a thorny tree that is 2–5 m tall. However, this tree grows in a dry climate and therefore cannot be meant here. In ancient Egypt, there were two famous water plants, the blue and the white lotus. These are plants though, and not trees, and therefore the translation “lotus trees” is incorrect.⁷ The hippopotamus can lie in the water, with only its eyes, ears and nose just above the water. But do the plants really give the animal shade? Also, in view of the verse 22, the translation “trees that give shadow” is preferable. Marshes occur in the Near East in many places, not just in Egypt. The trees by the stream or wadi are willows or poplars. Willow, in particular *Salix babylonica*, originally did not occur in the Near East and came to this area from China during Medieval times. The trees that bring shadow probably represent a species of poplar (*Populus euphratica* Olivier) or several kinds of reed that can be several metres tall.

Even if the current in the water is very strong, this does not hold it back. It is secure, even though the Jordan should surge against its mouth (v. 23). The mention of the Jordan indicates that we are biased if we only look to Egypt for the identification of behemoth.⁸ After this description follows a question: does anyone dare to grasp this animal from the front, to pierce its nose? (v. 24). The animal is here seen as invincible (v. 19), while in Egypt the hippopotamus was hunted. A favourite tactic was to pierce the nose, forcing the animal to breathe through its opened mouth (figure 1). Following this the fatal blow could be inflicted in the mouth. Egyptian pharaohs were proud of being able to kill a hippopotamus, since this contributed to the praise of their power as an incarnated god. In the myth of the battle between Horus and Seth, harpoons are used to kill hippopotamuses. Also, there was a festival known as “The Harpooning of the Hippopotamus”. During this festival a hippopotamus, a symbol of the enemies of the king, was killed ritually (figure 2).⁹ There are also examples of ordinary hunters hunting the hippopotamus.¹⁰

Based on all these arguments, it is impossible that behemoth is a hippopotamus. Some authors think that an author in Israel would not have had enough knowledge of

an animal living in Egypt to describe this animal accurately, and that confusion with other animals arose from this situation. However, this is an *ad hoc* solution. Remains of hippopotamuses have been found in Tel Dor in Israel and it is likely that they were present in large parts of Israel through to the Iron Age.¹¹ Therefore we can assume people living in Israel when Job was written were familiar with this animal. If we were to start from this knowledge and try to describe the hippopotamus, the description would focus on its squat appearance, its large mouth and deadly incisors, the strong legs that can crush and the gigantic strength of the animal.¹² In Job, however, different things are mentioned. It is therefore likely that another animal is described.

What, then, was behemoth?

If we take extinct animals into consideration, a herbivorous dinosaur seems a more likely candidate. The apatosaur had a large tail, lived on green plants and weighed about 30 tonnes. The ultrasaur could reach a height of 18 m and a length of 30 m, with a weight of 136 tonnes. It also was a herbivore with an enormous tail. The brachiosaur was 12 m tall, 23 m long and 60 to 70 tonnes in weight. Its tail could reach a length of nearly 6 m and a breadth of nearly 1.5 m. In the sauropods, large bundles of muscles are visible on the outside of the body of the animal. Behemoth is not only a herbivore, but more specifically it is a grass-eater. An animal that does fit this aspect is the 15 m long nigersaur, found in the Republic of Niger in Africa.¹³

Because new kinds of extinct animals continue to be found in our time, and because the description in Job 40 is not specific enough, we cannot identify precisely which animal is described. Neither do we know whether the above-mentioned animals still lived in the time of Job, but it is useful for our exegesis to include such examples.

Leviathan (Job 41:1–34)

After the description of behemoth, God calls Job to observe another impressive animal he has made. In this case, the description is extremely long and detailed. The animal concerned is leviathan, an animal that over the last centuries usually has been equated with a crocodile.¹⁴

Sometimes the word leviathan refers to hostile powers, but in Job 40–41 and in Psa. 104 a real sea creature seems to be described.¹⁵

Invincibility

This time the description immediately starts with all kinds of questions. Can Job pull in leviathan with a fishhook, or tie down its tongue with a rope? (v. 1). One could push the tongue of an animal down by tying a rope around the lower jaw, preventing the tongue from moving upwards, or by piercing the tongue with a hook. A crocodile does not have a clear tongue. Herodotus, for example, writes:

“It is the only animal that does not have a tongue, and it cannot move its lower jaw.”¹⁶ The modern commentator O. Damsté notes: “This is only the appearance of the animal: the crocodile does have a tongue, but this is almost wholly fused to the lower jaw. Because the lower jaw usually flatly rests on the ground and the crocodile lifts its head with its upper jaw, its lower jaw appears to be immobile.”¹⁷ The tongue is attached at the front and points backwards. The question posed to Job is a rhetorical question, and we should assume that a man cannot do this. Already, in answering this first question, it is unlikely that the animal referred to is a crocodile, because the tongue of this animal is hardly noticeable and also because crocodiles were caught and killed in Egypt. Papyrus Cha (ca. 1430 BC) depicts a man keeping a crocodile under control with a rope that comes from the mouth of the animal. He threatens to kill the crocodile with a knife that he holds in his hand, ready to strike.¹⁸

The next question to Job is: can he put a cord through its nose or pierce its jaw with a hook? (v. 2). This image derives from fishing, which used sharp thorns and tough reeds. The fish was taken home or preserved in the river, with the hook in its mouth, attached to the reed. This does not work with leviathan.

After this God mocks the idea that leviathan would speak from the position of a prisoner of war. Will it speak with gentle words, begging for mercy? (v. 3). Will it make an agreement to serve as a slave for life? (v. 4). Is it possible to make a pet of it like a bird and can it be put on a leash and serve as a toy for girls? (v. 5). According to Herodotus a crocodile can be tamed:

“For some Egyptians, the crocodiles are sacred, but others treat them as enemies. The people that inhabit the surroundings of Thebai and the



Figure 2. Egyptian hunter with roped crocodile (from Keel, ref. 18).

Moiris lake consider them to be especially sacred and both groups keep one special crocodile, which they tamed; they put glass and golden ear decorations on it and bracelets on its front legs and they present it with especially prepared holy food and treat them as very important creatures.”¹⁹

The next question is: is it possible that fishermen barter for it and divide it up among the merchants? (v. 6). Can Job fill its hide with harpoons or its head with fishing spears? (v. 7). A crocodile can be killed (figure 2) with a spear or harpoon to the neck, where the hard scales are absent (see

figure 3). Herodotus writes: “The people from the area of Elephantine, in contrast, do eat crocodiles and do not at all consider them to be sacred ... Crocodiles are frequently hunted and in many ways.”²⁰

Then an ironical remark follows: “Let Job lay his hand on the animal and remember the struggle: he will never do it again!” (v. 8). A hunter can have no hope of subduing the animal. The mere sight of it is enough to overpower a man (v. 9). No one is fierce enough to rouse the animal (v. 10a). The animal may sleep or seem to sleep, as is often the case with reptiles.

This part of the description does not focus so much on the appearance of the animal, but mainly on its invincibility.

God's application

If no one dares to rouse the animal, then who is able to stand against God? (v. 10b). Who will walk towards Him and be unharmed? Everything under heaven belongs to Him (v. 11). This intends to show that it is more dangerous

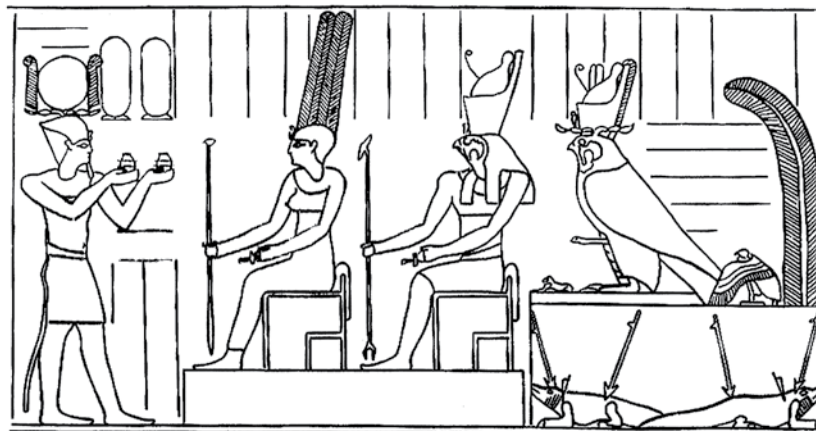


Figure 3. Crocodiles pierced with javelins (bottom right corner). Crocodiles can be killed with a spear or harpoon to the neck, where the hard scales are absent.²¹

to stand against God than it is to stand against leviathan. After these questions the reader expects Job to answer, but there is no answer, and God continues his exposition on leviathan.

Comparison

God does not fail to describe the limbs of the animal, nor its great strength and graceful form (v. 12). Who can strip off its outer coat? Who can pierce through its double armour? (v. 13). This can be taken to mean a double jaw or a double row of teeth. Who opens the doors of its mouth? These teeth are fearsome (v. 14). Leviathan's large number of teeth give it a fearsome appearance.

God describes the scales on leviathan's back as rows of shields, tightly sealed together so that no air can pass between them and they cannot be parted (vv. 15–17). Does this describe the scaly skin of a crocodile, which is fairly smooth? Or does this extended description refer to a more conspicuous feature: the scales that cover one another like roof tiles? Such scales can move and stand up.

God then describes a special and fearsome phenomenon regarding the head: when the animal sneezes, it gives off flashes of light (v. 18). Crocodiles like to lie in the sun and to open their mouth towards the sun. According to many, they sneeze as a reaction to the sunlight, because the light of the sun irritates them.²² However, although crocodiles can snort, they cannot sneeze as a way to cleanse their windpipe with a sudden blow of air. The lungs and the windpipe are closed off when they swim below the water surface and sneezing is therefore superfluous. Saltwater crocodiles in South Asia and Australia regulate their salt levels in a different way.²³ We can also think of living animals that produce light, which is more in line with the Hebrew form of the verb: to make something sparkle. Furthermore, in that case the phenomenon is not dependent on whether the sun shines at that moment or not.

“Firebrands stream from his mouth, sparks of fire shoot out of it. Smoke or steam pours from his nostrils, as from a boiling, steaming pot. His breath sets coals on fire and flames dart from his mouth” (vv. 19–21).

Interpreters who think this describes a crocodile take these words as a poetic portrayal of the snorting and hissing when the animal emerges from the water and the sparkling of the light in the water vapour. However, in these last four verses a distinction is made between the snorting of the nostrils (v. 18) and the flames that come from the mouth (vv. 19–21). The snorting could indeed be light reflected in the water drops, although it could be questioned whether the sun always shines when the animal emerges from the water. Both the other verses, though, speak of torches or flames coming from the mouth of the animal. That description fits better with a fire-breathing dragon, as we know them from many oral traditions. Although we have never seen such animals, we do know, however, of other animals that produce hot gasses, electrical currents and light.²⁴

After this special phenomenon, we can focus on the great strength of the animal and its fearsome appearance. Strength resides in its neck; dismay goes before it (v. 22).²⁵ In a crocodile, the head is attached to the body via a visibly narrower neck.

The tightly joined folds of leviathan's flesh (v. 23)²⁶ and its hard chest (v. 24) indicate fearlessness, indomitability and cruelty, because there are characteristics that people can observe from a distance.

“When he rises up, the mighty are terrified; they retreat before his thrashing” (v. 25). This probably describes powerful people rather than ‘gods’ or the waves of the sea. Crocodiles do not rise up, with the exception of the saltwater crocodile in Australia. Most crocodiles remain on four legs when they walk or swim.

Based on this description, not many people would dare to approach the animal. Even if they did, it would be in vain, since no human weapon crafted at the time had any effect on it (vv. 26–29). The verb ‘to laugh’ occurs several times in these chapters (39:7, 18, 22). This laughing indicates invincibility. From various descriptions, however, it is clear that crocodiles were hunted and that they were not immune to man's weapons.

King of the animals

“Pointy potsherds are attached to his underside; he leaves a trail like a threshing-sledge in the mud” (v. 30). This shows that the animal also frequented the waterside, in the mud or mire, and not just in the deep waters that are mentioned in the next verse. The crocodile's underside is fairly smooth and this does not fit with the description of the sharp underside that leaves traces. Various interpreters therefore think this describes the tail.²⁷ However, the tail is not “under him”. A crocodile tends to leave a dragging trail rather than trails cut into the mud. Most animals with scales have a relatively smooth underside. This is necessary for reptiles that live part of their lives on land, such as monitor lizards and crocodiles, because they need to be able to slide over the soil without getting stuck on rocks and vegetation. Consequently, this is the most vulnerable part of their body and not what we would expect from an impenetrable leviathan. When a scaled underside has sharp points, the animal must stand much higher on its legs than is the case in the reptiles we know.

Leviathan is also at home in deep water: “he makes the depths churn like a boiling cauldron and stirs up the sea like a boiling pot in which ointment is being prepared” (v. 31). It is improbable that the word “the depths” is used to denote the Nile. But even though it is conceivable that the Nile is referred to as a “sea” when water levels are high, still the combination of words in this verse indicates much deeper water. This interpretation is reinforced by the words “water depths” in the next verse. A translation as ‘ocean’, however, is not correct, because the oceans are too distant and the animal could presumably be seen from land.²⁸ The pot in which the ointment is prepared and churned is full of foam.

Some interpreters point to the musky smell that a crocodile gives off,²⁷ but the comparisons made in the verse concern movements, not smell.

The crocodile is an animal that inhabits rivers, not the depths and the seas. It can make the water foam through fierce movements during fights with other crocodiles, but the imagery here goes much further and seems to point more in the direction of a much larger animal. When the animal moves through the water, it leaves a glistening wake, so that it makes one think that the deep had white hair (v. 32). This imagery reflects something similar to the wake left by ships rather than the small wake of a crocodile. Furthermore, we can ask whether this imagery only denotes the wake left by swimming, or whether the animal also left traces of light by other means.²⁹

The description finishes with a comparison: “nothing on earth is his equal, a creature without fear” (v. 33). “He looks down on all that are haughty; he is king over all proud animals” (v. 34). The animal must be able to lift itself up high, but the word ‘high’ can also denote ‘proud’ (compare 28:8; 40:11).

God’s words

The last two verses of this chapter indicate that leviathan surpasses behemoth in majesty, even though the latter is one of God’s masterpieces (40:19). The greater length of the description of leviathan also points in that direction. Because of its loftiness, the description doesn’t fit a crocodile. This animal is not elevated above all other animals, such as the hippopotamus, and also not above the lion, the rhinoceros or the elephant.

An argument that is often used against this is that the author of the book of Job only knew behemoth and leviathan from stories and not from his own experience, which makes

the description less than true to nature.³⁰ However, this is implausible in view of the important function these animals have in the book of Job. Furthermore, this would invoke the question of inspiration: could an author represent God as speaking such inaccurate words? Moreover, we know from old texts and names that crocodiles were present in Egypt and Canaan.³¹ In the exegesis it became apparent that there are several more phenomena that are not in agreement with an identification of leviathan as the crocodile. Various interpreters therefore think the description pertains to



Photo by Péter Halaasz courtesy of wikimedia.org

Figure 4. The Bombardier beetle’s ability to generate an explosive mixture of chemicals may be a precedent for now-extinct animals having had abilities such as breathing fire.

mythological monsters,³² but the detailed description argues against this point of view.

Even if a degree of poetic freedom and poetic language is accounted for, many concrete instances remain that were meant to impress Job, and on which our identification must be based. When God is speaking, He wants to convince Job of the glory of creation, of which animals are a part. Job should prove that he is able to rule the world by curbing these animals. But one who cannot stand against the animals described should not try to resist God. The fact that these animals nevertheless have a place in creation shows that God’s work is far beyond human understanding, which is also the case for His reign over the world and His justice, which often lets the wicked pursue their evil deeds without punishing them. He is the ruler of the universe and is above all earthly and cosmic powers. Therefore He is also above all the plagues and disasters that Job suffers.

What then was leviathan?

The usual identification of leviathan as a crocodile leads to many problems. The Egyptians could hunt, capture and tame crocodiles.^{19–20} Just as for behemoth, it can be said of leviathan that the present animal kingdom does not contain clear examples of animals that satisfy the description. In the past, however, there have been dinosaurs that can be considered. Species that walked on their hind legs, highly raised up, can be mentioned. With regard to the fire breathing, is it possible to find an extant animal that can metabolically generate fire? The bombardier beetle (figure 4) indeed can. It is able to produce a mixture of chemicals in its tail resulting in fiery explosions which it can shoot off against its adversaries.³³

If we assume the possibility of a larger animal, it has been proposed to think of *Tyrannosaurus rex* or the kronosaur. The problem is, however, that the first of these is a land animal, while the second only lives in the sea and could not access dry land. Lately, *Sarcosuchus imperator* seems to be a better candidate: a monstrous crocodile covered by some kind of armour plates (like roof tiles). It could weigh up to 10 tonnes and reach a length of 12 m. It had an unusual bulging body cavity at the end of its snout. This could have been used for mixing gasses that were ignited there.³⁴

However, the description in Job 41 does not have a scientific character and we cannot identify precisely which animal is meant.

Legends and traditions

The interpretation outlined above may seem strange since most scientists think that the dinosaurs went extinct long before humans appeared on Earth. When footprints of dinosaurs are found, such as in Bet Zayit, near Jerusalem, and recently in Yemen, a very early date is used.³⁵ However, according to Genesis 1–11, humans and dinosaurs coexisted from when humans were created until at least after the Flood.

There are many stories about people fighting dragons and sea monsters. One of the oldest stories is that of Gilgamesh, a hero from ancient Babylon. Several times it is remarked, regarding this animal, that “His mouth is fire, his breath is death.”³⁶ Various Babylonian depictions portray dragons; for example, a seven-headed dragon is described, with fire emanating from the body.³⁷ The Chinese (fire-breathing) dragons are familiar to everyone and may indicate that such creatures existed in the past.³⁸

Without a doubt these stories were embellished throughout history and all sorts of details were added. However, the manifold similarities between the descriptions and the recovered dinosaurs do point to an underlying reality. All this points to an earlier period during which people and dinosaurs were contemporaneous.³⁹ This means that this possibility should also be taken into account for the book of Job. Only these kinds of animals satisfy the descriptions of the gigantic animals in Job 40–41,⁴⁰ and the posting of guards against this kind of sea monster described in Job 7:12 is also easier to understand. Whoever thinks this kind of explanation is impossible has to assume that the descriptions of these gigantic animals are very inaccurate.

The relationship between gigantic animals and Satan

God’s speech is geared towards refuting Job’s reproach that He acts wrongly. This is accomplished by referring to ‘diabolic’ creatures. If Job does not have the courage to fight behemoth and leviathan, then he cannot take God on. But God himself defeats these animals. The world is not in the hands of the evildoers, because JHWH reigns.⁴¹ It seems that God sees a relationship between the large animals and Satan and describes them as such. In this way we will understand that only “his Maker can approach him with his sword” (40:19); this also means that his Creator is indeed more powerful than all the evil that is present. And we will understand that the final part of the description of leviathan also refers to Satan as “the prince of this world”: “He looks down on all that are haughty; he is king over all that are proud” (41:33–34).⁴²

Job knew little of the great lawsuit between God and Satan described in Job 1–2. But through the references to creation and to the mighty animals that are subjected to God’s power, Job may have understood that even terrible things are subjected to God. Through this the Lord has revealed—although Job could not fully grasp it—that there was a purpose behind the suffering.

Conclusion

Behemoth and leviathan may well be now extinct species that were still living in Job’s day. While what is known about several species of dinosaurs may appear to fit some aspects of God’s description of behemoth and leviathan, the most we can say with confidence is that the

descriptions do not match any known living species today. At the same time, to call them ‘mythological’ creatures is to do violence to the text and context of Job; therefore, we affirm that these were actual creatures of which Job had knowledge (although we cannot state whether Job had direct or indirect knowledge of them). They symbolize the power of evil, connected with Satan, who is mentioned in the first chapters of the book. The words of God humbled Job and showed him that God is above all powers in this world.

References

1. This article is based on Paul, M.-J., van den Brink, G. and Bette, J.C. (Eds.), *Bijbelcommentaar Ezra – Job* [Bible commentary of Ezra–Job]; in: *Studiebijbel Oude Testament* [Study Bible of the Old Testament], vol. 6. Veenendaal: Centrum voor Bijbelonderzoek, the Netherlands, 2009; www.studiebijbel.nl, translated by Naomi Verboom. In this article the verses are numbered in accordance with the English translations. The Hebrew numbers in chapter 41 differ: Eng. 41:1–34 = Heb. 40:25–32 and 41:1–26.
2. A number of features in Job point toward a date in the second millennium shortly after the time of Israel’s patriarchs. Job lived more than 140 years (Job 42:16). He received money in the form of a *kesitah*, a measure of silver that is mentioned only in connection with Jacob (Gen. 33:19; Josh. 24:32). His wealth was measured in cattle. He served as his family’s priest. The people mentioned in Job also point to this period of time. Job lived in the land of Uz (Job 1:1), in Lamentations this land is said to be in Edom (Lam. 4:21). Apparently, this portion of Edom was named after Uz, the son of Dishan, a descendant of Esau (Gen. 36:28). The Septuagint added information about Job at the end of the book and identified him with the Edomite Jobab, mentioned in Gen. 36:33.
3. Whitney, K.W., *Two Strange Beasts: Leviathan and Behemoth in Second Temple and Early Rabbinic Judaism*, Eisenbrauns, Winona Lake, IN, 2006.
4. The word is in the plural; the singular often translated as ‘livestock’. From the context it is clear that a special animal is meant and therefore this is intended as an intensive plural. The word could be rendered as ‘gigantic animal’ or ‘bestly animal’. Cf. Lang, W., *Job and Science*, Genesis Institute, Richfield, UT, 1991; www.creationism.org/lang/LangJobScience/LangJobSci40.htm, accessed 29 March 2010.
5. The verb *ch-p-ts* I means ‘to long for, to desire’. From the context it is translated as ‘to hold/make stiff, to bend, to slacken’ here, but this is not the only text where this translation is fitting. LXX and Syr. support ‘to make stiff’, but the Arabic rendering ‘to bend’ is also possible. The meaning should be derived from the analogy: like a cedar. For the cedar compare Eze. 31:3–9; Psalm 92:12 and Ellwanger, W., *The Cedars of Lebanon*, *Bible & Spade* 15:114–116, 2002. Based on the Vulgate ‘tail’ it is sometimes taken to mean penis. However, this is unlikely, because this is not a special characteristic of this specific animal. Furthermore, mating takes place in the water and is not visible from the shore. For further details, see Steel, A.K., *Could Behemoth have been a dinosaur?* *Journal of Creation* (formerly *TJ*) 15(2):42–45, 2001; creation.com/images/pdfs/tj/j15_2/j15_2_42-45.pdf, accessed 29 March 2010.
6. Pritchard, J.B., *ANET* nos. 351–354.
7. Compare Thimes, J.L., *The Lotus in Ancient Egypt and the Bible*, *Bible & Spade* 18:10–13, 2005.
8. Some interpreters consider the Jordan to be no more than an example of a river with a strong current here and think that the Nile when it is flooding, is meant but if the land Uz was located near the Dead Sea, it is possible that the Jordan itself is meant.
9. For the myth, see Pritchard, J.B., *ANET* nos. 15b–16a. Compare Ruprecht, E., *Das Nilpferd im Hiobbuch*, *VT* 21:209–231, 1971.

10. Keel, O., *Jahwes Entgegnung an Ijob. Eine Deutung von Ijob 38–41 vor dem Hintergrund der zeitgenössischen Bildkunst* (Yahweh's answer to Job. An explanation of Job 38–41 against the background of the contemporary pictures) Vandenhoeck & Ruprecht, Göttingen, Germany, p. 134, 1978. This book references depictions of hippopotamus hunts.
11. Raban-Gerstel, N., Bar-Oz, G., Zohar, I., Sharon, I. and Gilboa, A., Early Iron Age Dor (Israel): a faunal perspective, *BASOR* 349:25–59, 2008; pp. 43, 45, 48. The authors consider the hippopotamuses to represent a natural occurrence in the marshy surroundings of Tel Dor in the Early Iron Age (around 1300 BC). The inhabitants of Tel Dor must have hunted these animals for consumption. Hippopotamuses occurred in the region of Saron and in the coastal plains of the southern Levant (the eastern part of the Near East) through to the Early Iron Age. According to M. Bright, the hippopotamuses lived in the marshes north of the Sea of Galilee; Bright, M., *Beasts of the Field: The Revealing Natural History of Animals in the Bible*, Robson, London, p. 29, 2006.
12. The Greek researcher and storyteller Herodotus (fifth century BCE) was the world's first historian. In *The Histories* he describes the expansion of the Achaemenid empire. Herodotus is rather imprecise in his description of a hippopotamus (*Histories*, II, p. 71). It is now known that he took this description from Hecataeus. Hippopotamuses were probably already extinct in Egypt when they travelled there. See; www.livius.org/aa-ac/achaemenians/achaemenians.html.
13. This nigersaur lived in a warmer climate than is postulated for Edom.
14. Earlier the animal was identified as a whale. LXX translates as *drakonta*. The Hebrew language does not have a word for crocodile, even though these animals did occur in Canaan, as is clear from Greek and Latin place names.
15. Cf. Paul, M.-J., Leviathan, *NIDOTTE* 2:778–780, 1997.
16. *Histories*, II, p. 68.
17. Damsté, O., in the Dutch translation of Herodotus, *Historiën*, Fibula-van Dishoek, Bussum, The Netherlands, 1983.
18. Keel, O., Zwei kleine Beiträge zum Verständnis des Gottesreden im Buch Ijob (xxxviii 36f, xl 25), *VT* 31:223–225, 1981.
19. Herodotus, *Histories*, II, ref. 12, p. 69.
20. Herodotus, *Histories*, II, ref. 12, pp. 69–70.
21. After Keel, ref. 10, p. 152, which also has references to more depictions. Herodotus also writes that a hunter puts mud on a crocodile's eyes when he has dragged a crocodile that has bitten the bait on land. "When he has done that, it is easy to bring him under control" (*Histories*, II, ref. 12, p. 70).
22. E.g. Delitzsch F., *Job*. English translation, repr. Eerdmans, Grand Rapids, MI, p. 372, 1973.
23. Bright, ref. 11, p. 36.
24. The bombardier beetle ejects gas with a temperature of about 100°C at his attackers; the electric eel and the electric ray produce electric currents, the latter producing currents of up to 600 volts with the so-called 'Hunter's organ'. The torpedo fish or electric ray is also infamous because of the electric currents it produces. Fireflies and glow-worms are well known for their ability to produce light. This phenomenon is called bioluminescence.
25. Does the neck swell, as stated in some translations? Bright points towards the Nile monitor (*Varanus niloticus*) which—in contrast to the crocodile—does have a long neck. This animal also has a long tongue that continuously shoots in and out of its mouth and sometimes looks like a sparkling flame (pp. 37–38).
26. The literal translation is: 'the things that fall down, hang down'. In combination with 'flesh' this indicates folds of flesh. Some translations have 'muscles' or do not translate the word at all. The flesh that hangs down does not shake because it is very firm. What does this mean? Does it indicate limbs or genitals? That would not fit with the word 'stick'. If it indicates folds of flesh that stick to the body or to one another, we must conclude that this is not the case in the crocodile.
27. E.g. Delitzsch, ref. 21, p. 379.
28. It is possible to think about the Mediterranean Sea or the Gulf of Aqaba.
29. In tropical and subtropical waters the phenomenon of bioluminescence occurs occasionally: single-celled algae produce light when they are set in motion. If a large animal, a dolphin or a crocodile, swims through water which contains these organisms, it leaves a lighted wake, because these algae produce light for several minutes (Bright, ref. 11, p. 39).
30. Bright, ref. 11, p. 38.
31. Up until sometime in the 19th century there was a 'Crocodile River' north of Caesarea and a 'Crocodile city' south of the Carmel, that are already mentioned by Strabo and Plinius. In the 19th century, crocodiles were still sighted in the Kison and Jarkon Rivers in the north of Israel. Strauss, H., *Hiob. 2. Teilband 19,1–42,17*, Biblischer Kommentar Altes Testaments, Neukirchener Verlag, Neukirchen-Vluyn, Germany, p. 381, 2000; Bright, ref. 11, pp. 35–36.
32. E.g. scholars as M. Pope and G. Fohrer. See Hartley J.E., *The Book of Job*. NICOT. Eerdmans, Grand Rapids, LMI, pp. 521–522, 1988.
33. Armitage, M.H. and Mullisen, L., "Preliminary observations of the pygidial gland of the Bombardier Beetle, *Brachinus* sp.", *Journal of Creation* (formerly *TJ*) 17(1):95–102, 2003.
34. See Brooker, P., A new candidate for Leviathan?, *Journal of Creation* 19(2):14–16, 2005; creation.com/images/pdfs/tj/j19_2/j19_2_14-16.pdf, and Wieland, C., *Dragons of the Deep*, Master Books, Green Forest, AR, pp. 44–47, 2005.
35. See Avnimelech, M.A., *Dinosaur Tracks in the Judean Hills*, The Israel Academy of Sciences and Humanities, Jerusalem, 1966, and www.dailymail.co.uk/sciencetech/article-1021401/Dinosaur-tracks-discovered-Arabian-peninsula.html, accessed 29 March 2010.
36. See Pritchard, J.B., *ANET*, nos. 78–83.
37. See Pritchard, J.B. *ANEP*, nos. 671, 691.
38. See Cooper, B., *After the Flood*, New Wine Press, Chicester, UK, chs. 10 and 11, 1995; <http://ldolphin.org/cooper/index.html>, accessed 29 March 2010.
39. Careful examination of these claims is necessary; in the past, inaccurate examples have also been used. For important examples, see Darek Isaacs, *Dragons or Dinosaurs? Creation or Evolution?* Bridge Logos, Alachua, FL, 2010.
40. Bright, ref. 11, pp. 27, 38, recognises this, but he does not accept this possibility, because he assumes that the dinosaurs went extinct millions of years before people appeared on Earth.
41. J.E. Hartley indicates that behemoth possibly symbolizes natural powers that can cause destruction in specific regions (earthquakes, floods), while leviathan represents the cosmic evil powers that, from time to time, can disrupt life on Earth. See Hartley, J.E., *Theology of Job*, *NIDOTTE* 4:780–796, 1997; p. 791.
42. Morris, H.M., *The Remarkable Record of Job*, Baker, Grand Rapids, MI, 1988.

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