creatures God created. At one time I, too, had looked at these verses and thought they might give us taxonomic terms. However, the pattern changes somewhat during the account surrounding the Flood.

Genesis 6:20,

"the birds [*ohf*] according to their kinds"

"the animals [*behemah*] according to their kinds"

"every creeping thing [*remes*] of the ground, according to its kind".

Notice something is missing here, the 'beasts of the earth' or *chayat ha'aretz*.

Genesis 7:14,

"every beast [*chayah*], according to its kind"

"all the livestock [*behemah*], according to their kinds"

"every creeping thing [*remes*] that creeps on the earth, according to its kind"

"every bird [*ohf*], according to its kind, every winged creature".

Here we have almost the same groupings as Genesis 1, but *chayah*, which Klenck acknowledges is a very general term, appears in place of *chayat ha'aretz*. Apparently the qualifier 'according to its kind' does not signal the use of a taxonomic term.

Klenck also nicely lists the groupings found in Genesis 2 where Adam names the animals. It is similar to Genesis 1, but the phrase *chayat ha'aretz* does not appear in this chapter. In fact, after it is used repeatedly in Genesis 1, this phrase does not appear again until Genesis 9. A similar phrase, *chayat ha'sadeh* or beasts of the field, is used in Chapters 2 and 3. This variability is typical of normal language usage. In contrast, in taxonomy specific groups have a single term which identifies them consistently at any given taxonomic level.

When I wrote my paper, I suggested a genitive translation of the noun-noun construct phrase *sheretz ha'ohf* (i.e. the swarmers of the flyers) which was consistent with what I had learned in studying Hebrew. Since translation of these phrases was taught the same way in several elementary Hebrew materials I had used, I saw no reason to reference it. Surprised at Klenck's insistence that only an attributive translation was possible (i.e. the flying swarmers), I consulted the elementary Hebrew grammar Klenck referenced in both his papers. Weingreen only discusses the genitive translation of construct phrases; the same one I offered in *my* paper! Having said that, I point out that the specific phrase *sheretz ha'ohf* was not directly mentioned in any of these resources. Recently, a friend with advanced knowledge in Hebrew pointed out that the translation of construct phrases can be quite complex. Either translation might be possible; it depends on the lexical meaning of *ohf*.

Klenck misunderstood my reasons for identifying *sheretz ha'ohf* with the *ohf* created on Day 5. It does not depend on the translation of the construct phrase, but on the fact that they have wings and fly. I mention that within some insect kinds wings may have been lost. I never state or imply that all insects would be included in *sheretz ha'ohf*.

I am a bit bewildered at the words and thoughts attributed to me by Klenck regarding Hebrew study tools. I did mention the Strong's briefly in an early part of my paper. This is an excellent study tool that I have used many times over the years. I have also used reference texts and Bible software programs which use the Strong's numbering system. All references have their limitations, and mentioning this should not imply that they are being degraded. The common pitfall I described where the Strong's is sometimes misused was not intended to relate directly to the Klenck article.

Klenck claims I am in error by not stating that clean animals are listed in Leviticus 11 and Deuteronomy 14. The context of my comment should have made it apparent that I was referring to those listed 'according to their kinds' and only some of members of the unclean *ohf* are mentioned that way in both places. Additionally, the works I cite in that paragraph, by authors with a significantly greater understanding of Hebrew than Klenck or I, discuss the problems with assuming that baramins (kinds) are specifically identified in these passages.

The Hebrew for *degat* was not misspelled, though I admit the sheva was blurred in my print copy. The Hebrew for *ha'shamayim* was incorrect. The vowel and dagesh moved to a separate space next to the letter with which they should have appeared. It was the only error I noted in the proof PDF that did not get corrected before it went to print. So congratulations to Klenck; he did find one error. Hebrew fonts are very difficult to work with and errors commonly show up when WORD documents are converted over in preparation for printing. I often have a lot of corrections and the diligent staff of CMI work very hard to fix them. This was indeed a rare find.

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References

1. Klenck, J.D., Major terrestrial animal taxonomic classifications as defined by God, *Journal of Creation* **23**(2):118–123, 2009.
2. Klenck, J.D., Genesis and the demise of the dinosaurs, *CRSQ* **46**(3):159–166, 2010.

Hebrew scriptures as an aid to developing a creationist taxonomy (3)

I read Jean Lightner's 'Hebrew Scriptures as an aid to developing a creationist taxonomy' in *Journal of Creation* **24**(1):77–81. I was surprised by her little knowledge of Hebrew.

Lightner's big mistake is that she tries to combine *seres* or swarmers with the birds or *oph* in Vayikra (Leviticus) 11:20. This is a big problem and she quotes other authors, apparently those who did not study Hebrew, that support

her claim. She even mentions this as a definitive statement in her abstract and conclusion.

To provide an example of Lighter's error, it would be as if G-d described all the cats that were unclean and then mentioned all fish that were unclean, beginning with 'the catfish'. Lighter then jumps to the conclusion that because cat is found in catfish, then catfish and cats belong to the same group. However, in the word 'catfish' *cat* is simply a descriptive term for this type of *fish*. Cats are one group, and fish—catfish, sunfish, puffer fish, dogfish—all belong to the fish group.

Similarly, in the term *seres ha'oph*, the word *the flying* (*ha'oph*) is used to describe swarmer (*seres*). Here, Lightner stumbles when she assumes that since G-d mentions *oph* in *seres ha'oph*, then *seres ha'oph* must be part of *oph* or the group comprising birds and bats.

This is not the case, as *seres ha'oph* describe one group of swarmers. If Lightner studied the Torah, then she would know that Vayikra 11:20 is the beginning of a big section that discusses many kinds of unclean swarmers: swarmers that fly (20–23); swarmers that creep on the earth (29–31); and swarmers with many feet (41–44).

Lighter should have remembered her own comments in Bereshit or Genesis 1:25 that *remes* is the only group which includes *kal* or all/everything, signifying that this is a bigger group with more kinds than those of *oph*, *chayat ha'eretz* and *behemah*. Both *remes* and *seres* are used to describe creepers and swarmers, sometimes in the same verse. So when it came to a discussion of *seres* in Vayikra 11, Lighter should have expected more kinds of *seres* and not made such large *ta'u'yot* (errors).

Lightner could have saved herself much embarrassment by checking her work with someone who actually studied Hebrew.

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Response to Meave Levy's comments

In my paper I suggested that the *seres ha'oph* of Leviticus 11:20–23 can be associated with the flyers (*oph*) created on day 5 because they have wings and can fly (Genesis 1:20, 21). Additionally, I supported this by citing the Theological Word Book of the Old Testament (TWOT), which lists insects in the definition of *oph*.[1] Am I to assume that Harris *et al.* have not studied Hebrew?

My discussion of *seres ha'oph* was in response to Klenck's article which insisted there was a single way this construct phrase could be translated.[2] I suggested an alternative, which is the genitive pattern of translation taught in the various elementary Hebrew courses/grammars that I have seen. It is the most common way to translate noun-noun construct phrases and is used throughout the Bible, as evidenced by phrases such as beasts of the earth, beasts of the field, fish of the sea, and birds of the heavens.

I acknowledge that translation of construct phrases can be more complex than Klenck or I suggest in our papers. There are knowledgeable Hebrew translators who prefer an attributive or adjectival rendering of *seres ha'oph*, i.e. flying swarmers, as Levy, Pfeffer and Klenck do. However, the argument that the *oph* created on Day 5 can be reasonably considered to include flying insects does not depend on which translation one prefers.

If one looks at Leviticus 11 as a whole, it includes descriptions and lists which identify clean/unclean creatures and discusses the implications of this. The groupings fall rather naturally as in the verses:

(2–8) characteristics to distinguish between clean and unclean among the *behemah* which are on the earth; along with specific examples applying these rules.
(9–12) characteristics to distinguish between clean and unclean *seres ha'mayim* [another construct phrase] and all living creatures which live in the water.
(13–19) a list unclean creatures among the *oph*.
(20–23) a list of four clean creatures among the otherwise unclean *seres ha'oph*.
(24–28) a section which discusses the implications of contact with unclean creatures; (26–27) reiterates the criteria for unclean *behemah* and adds that animals which travel on all fours and have paws are unclean.
(29–31a) a list of unclean *seres* from the swarmers that swarm on the earth [a construct phrase using *seres* does not appear here as with the previous two examples].
(31b–40) a second section discussing the implications of contact with unclean creatures.
(41–43) a second, general reference to avoid eating swarmers that swarm on the earth; instead of a specific list, it mentions avoiding any that go on their belly, go on four feet, or go on many feet.
(44–47) a summary.

Since discussion of *seres ha'oph* immediately follows the section on *oph*, it would not be unreasonable to conclude that they could be combined into one section. In this case most (bipedal) flyers are clean, except for those listed (vv. 13–19), but the *seres ha'oph*, which have more feet, are unclean except for those listed (vv. 20–23). This would be consistent with Deuteronomy 14:11–20 where *seres ha'oph* are mentioned within the section discussing *oph*. Of course the focus of these passages is on the issue of clean vs. unclean, not taxonomy.

Make no mistake about it, I do not believe that God intended to directly hand us taxonomic terms. However, the study of Scripture is always profitable and I am optimistic that useful information helpful to creationist taxonomies can be obtained. Given the above discussion, I think there is a strong reason to believe that flying insects were created on Day 5 with the other flyers.

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References

1. Harris, *et al*., *Theological Wordbook of the Old Testament*, #1582a, BibleWorks. v. 7.0, 2001.
2. Klenck, J.D., Major terrestrial animal taxonomic classifications as defined by God, *Journal of Creation* **23**(2):118–123, 2009.

Marine fossils in amber support the Flood Log-Mat Model

I wish to draw your attention to page 9 of *Journal of Creation* **24**(1), and in particular to the encapsulated spider photograph. Michael J. Oard is a regular contributor and often has something quite readable, and whilst the article deals with the Flood-Mat concept, I believe he misses the point of the spider encapsulation.

From early days I learned encapsulation using low viscosity epoxy resins was indeed not only science but cutting edge art as well. The big troubles here are:

1. The need for transparency and
2. The inclusion of air around the body of the encapsulated subject
3. Getting an exothermic reaction right to prevent the point where by the whole thing becomes distorted by the heat of the reaction.

Commercial encapsulation of say electronic circuits use a lot of filler, not really for opacity, but for a reduction in the volume of reactants and therefore a reduction in the exothermic reaction. In short fillers hide a lot of sin as well as circuit components.

Transparency is a dreadful requirement, every mistake shows up and the greatest distortion of all is the inclusion of air bubbles around the object either from improper wetting out of the surface of the object or from boiling out the essential juices within the object. Hairy objects like spiders are incredibly difficult to address.

In this instance the insect was encapsulated in full gait—hunting spider one second—object d'art the next. There are no obvious air inclusions though there is a plethora of included particles around the body suggesting the spider was on easily spreadable bark at the time of encapsulation.

Presumably (and I was not there) the blob hit the spider from above, wrapped around the insect, picked up some detritus from under the spider and settled into a shape that when eroded over time presents us with a totally enclosed insect. Obviously the spider's skeleton provided some reinforcing to the amber as it cured and in its tumbling state until it was retrieved. However, the cure rate of the amber was slow enough that no boiling out of the fluids occurred as the spider abdomen is clearly well formed. That is particularly tricky given that the spider is covered with hairs and capillary openings for air to enter the spider's body. It appears death was instantaneous as there is an absence of striations around the body to indicate after encapsulation movement. Thus the goo at that time must have had a viscosity of at least 300 centipoise to instantly immobilise the prey—the thickness of honey on a cold winter's day.

To get the wetting out of the body shown usually requires a viscosity approaching 5 centipoise—the thickness of honey at about human body temperature—but the inclusion of suspended detritus around the spider's body suggests that the viscosity was significantly higher.

It almost becomes a paradox, except that the amber may have fallen in a blob from a height which ensured that there was a variation in viscosity from the centre of the blob to the outside skin. Such a variation would present the necessary encapsulation components to achieve the unusual array within the object photographed. That is, immobilised spider compete with detritus suspension at the same time. The speed of impact could also account for blowing away surrounding air, and the rebound after impact with the surface the spider was walking over would account for the suspension of the body in a walking gait and the suspended detritus.

Now to digress somewhat. We have *Pinus radiata* on our property near to where we park the cars if they are intended to be reused during the day. During the year pine cones form and about autumn the cockatoos arrive to digest the pine cones. They usually fly in very quietly about 9 am but by 3pm, high on the blend of terpenes they have ingested they hurtle around the house in a most drunken display of aerobatic skills. Then the branches where the cockatoos have been harvesting the pine cones weep sap. The sap hits the cars with an initial viscosity of circa 150 centipoise and if not removed becomes part of the paint system of the vehicle. This viscosity would not be enough to immobilise a spider of the size shown—it would slow it down but not fixate the insect as shown. The droplets are small; about 3 to 10 ml in volume only. The photograph suggests an encapsulated volume of around 30 to 50 ml depending upon the actual size of the spider.

To allow for the current size of the amber object in the photograph we would need to allow for about a 50% reduction in the overall mass due to rolling and abrasion. However no matter what reduction you may wish to argue for, it is a very large chunk of goo that hit the spider. This large chunk would only be available if the branch was being removed by a herbivore and the sap was able to pour out before hardening and sealing the stump. This obviously would be possible in the age of the dinosaurs where we are told tree pruning was achievable.

The point of this entire discussion revolves around the chemistry of encapsulation, and I contend that the way it was handled was poor to the point that it can be seen as trite, and to me that is a disappointment. It reduces the veracity of the argument by Oard and this is disappointing.

At the top of column 3 on page 9 some effort has been made to address this problem, but to me having spent some time working with low viscosity epoxy resins in encapsulation, the