Ever since the days of Noah (Gen. 9:21) man has consumed alcoholic beverages to excess. If taken with food the alcohol is absorbed slowly, but when taken on an empty stomach it is rapidly injested leading to a high alcoholic content in the blood. As the majority of alcoholics stop eating almost entirely when they go on a spree this may lead to delirium tremens and eventually to irreparable mental deterioration. Food containing thiamine, that is vitamin B_1 , is necessary to protect the nervous system from the effects of alcohol.

During the days of prohibition no beverage in the U.S.A. could be sold with a content of more than 1/2 of 1% of alcohol according to the Volstead Act. But freshly baked bread may have an alcoholic content up to 3 or 4 per cent. As the bread dries out, however, the alcohol soon evaporates.

No one knows when he begins to drink whether he will end up as an alcoholic or not. One out of nine casual drinkers becomes an alcoholic. The earmark of an alcoholic is that when he takes one drink he cannot stop drinking. This is true even after 20 or 30 years of abstinence. The modern idea is that alcoholism is a disease, something like an allergy. No doubt it is harder for some people to drink moderately than it is for others, but from a spiritual point of view we recognize that alcoholism is sin and that only the grace of God can save a drunkard. Lint and Schmidt⁹ have shown that the number of alcoholics in a community is directly proportional to the total amount of alcohol consumed in that area. Rather than seeking to treat the alcoholics as an isolated group, every effort should be made to reduce the total consumption of alcohol and thereby decrease the number of alcoholics.

Tea and coffee are usually regarded as harmless non-intoxicating beverages and no doubt they serve a useful purpose. Some people get a quick pick-up from the small amount of caffeine in these beverages. But it is well to remember that both tea and coffee contain the astringment principle of tannin which is used to make leather out of the hides of animals.

"Dust thou art" and, as we have seen, each one of us is physically a part of the earth and "the earth is the Lords." (Ps. 24:1) But the earth is growing old. According to the principle of uniformity the earth and the universe will continue for millions of years until they finally burn out. But God has said that "the earth shall wax old as a garment." (Isa. 51:6) With the population explosion there just isn't enough land to go around so that every one may live in comfort. There are no more continents to plunder. "Nevertheless we . . . look for new heavens and a new earth, wherein dwelleth righteousness." (2 Peter 3:13)

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A GENERAL ANALYSIS OF THE BIBLICAL "KIND" (MIN)†

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The biblical term **min** ("kind") is examined with regard to its etymology, form, and usage. It is shown that **min** is a strict classificatory term denoting definite "'units of creation" and not a term signifying merely that "like begets like," The article concludes with a general analysis of the Mosaic lists of clean and unclean animals as a preliminary to an investigation of the taxonomic extent of the **min**.

Introduction

Christian evolutionists contend that the phrase "after its kind" merely expresses the fact that life reproduces its overall pattern by embryos, seeds, or fruits^{1,2} Though this is of course true, in

addition, the "kinds" or *min* are distinct entities which did not result from any evolutionary process but are the direct "units of creation."

The Etymology of Min

The term *min* has been associated with the Hebrew *manah*,³ to distribute by number, order, or class of things.⁴ Some scholars associate it with *temunah*,³ i.e. form or representation, from the root meaning "to think out." Others claim it has an Arabic root meaning "split" or "division."⁶

[†]This article is dedicated to the memory of Dr. Jacobus Johannes Duyvené de Wit (1909-1965), late Professor of Zoology at the University of the Orange Free State, Bloemfontein, South Africa.

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This is from relatively late Arabic texts and post-Biblical Hebrew. In Biblical and inter-Testamental Hebrew, *min* is used only to specify a kind of animal or plant.

Grammatical Form

The term *min* occurs 31 times in the Old Testament,⁷ of which 30 are in the books of Moses and one in Ezekiel. It is always used in the singular with respect to the type of life it describes, even when the latter is plural (as in Ezk. 47:10).⁸ Thus it is a collective noun like the word *daghah* used for fish.⁹

The term *min* is followed by five suffixes, two masculine, two feminine, and one plural.¹⁰ This indicates that *min* is used to provide formal specification. It is always used with the *lamedh* preposition (1^e), thus indicating reference to a norm or standard and the suffixes give this preposition some distributive force¹¹ as in "according to all its kinds." The presence of the preposition further substantiates the conclusion that the purpose of *min* is to provide formal specification.

Context of Use

In Genesis One the emphasis falls on the *original distinction* of kinds and on their *individual continuance.* In verses 24-25 we are told that on the sixth day God "made the beasts of the earth according to (all) their kinds and the *behemah* according to (all) their kinds and all the creepers of the ground according to (all) their kinds."

Earlier, in verses 11-12, it is written of the plants that "the earth caused to go forth freshshoots, plants seeding seed according to (all) their kinds and trees making fruit as to which their (the trees') seed is in it (the fruit) according to (all) their (the trees') kinds." This emphasis on the seed should be particularly noted for like so many emphases in these early chapters it provides a theme which continues through Scripture. In particular the phrase *"asher zar'o bho leminehu"* ("as to which his seed is in it according to his kind") is alluded to in I John 3:9: "Everything that has been begotten of God does not commit sin because *His seed abides in him* and he is not able to sin because he has been begotten of God."

In Genesis 8:19 the term *mispachah* is used instead of *min* as in Genesis 7:14. Now this term denotes extrinsic relationship and not genetic or intrinsic blood relationship. As Speiser¹² concludes, it is used "basically as an administrative rubric." When blood relationship is indicated such terms as *'am, moledheth* (kinsfolk) and *yach* (kinsfolk from *chuyah* "to live") are used. This indicates that the different *min* are genetically unrelated and that even members of one *min* may not be genetically related. In contexts where the possibility of crossbreeding is in view a different word, *kilayim*, is used (Lev. 19:19, Deut. 22:9). For this word the meaning "of two kinds" is given, the lexicons referring to the Ugaritic *kl't ydy* ("both my hands") and to Akkadian, Arabic and Ethiopic roots meaning "both." The implication is that different *min* cannot produce hybrids.

The Limits of the Min

The only passages which shed light on the precise limits of the *min* are the food law passages in Leviticus 11 and Deuteronomy 14. These passages are therefore of crucial importance and this section will deal with several general points.

The first and major point concerns identification. It is usually stated that although several of the animals in these lists can be definitely identified, a very large number cannot.¹³ But after a thorough study of the lists, I have come to a much less pessimistic conclusion. There are so many constraints that in most cases there can be little doubt as to the identification.

In the first place the exact meaning of the Hebrew class names must be considered. Figures 1-5 present a detailed analysis of these. However it must be borne in mind that these terms are those of the everyday language—they are *not* used with scientific precision.

In everyday English the term "bird" may be used of all feathered vertebrates, or restricted to those hunted as game, and the term "animal" may include or exclude man, or may be restricted to quadrupeds.

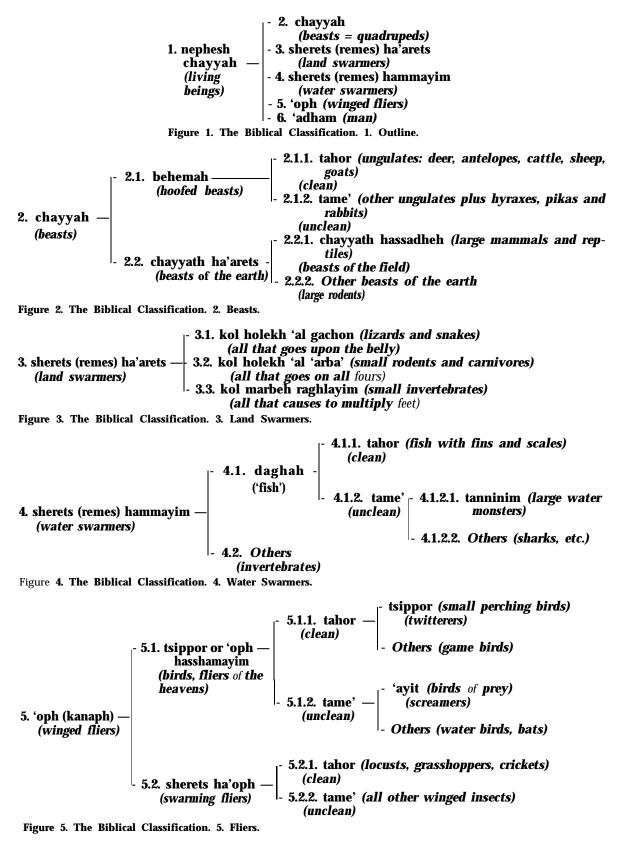
So it is in Hebrew. The term *behemah* is often used in reference to all quadrupeds and not simply to those which bear hooves. Similarly *tsippor* may be used of all birds or only of song-birds. Nevertheless the figures do give the stricter meanings which apply in the passages under investigation.

It should also be noted that the Hebrew classification cuts right across our modern biological classifications. An attempt to reconcile the order of creation in Genesis One with the evolutionary interpretation of the fossil record is consequently quite futile.

The second constraint is the recorded characteristics of the clean or unclean groups. For example, the A.V. translation "beetle" for a name in Leviticus 11:22 is quite incompatible with the definition of the group given in verse 21. The third constraint is the presence or absence

The third constraint is the presence or absence of the phrase "in all its kinds." Terms with this qualification clearly denote a greater variety of animals than those without it.

The fourth constraint is the available philological and contextual evidence. In Hebrew a name was far more than a mere identifying label; it was usually intended to mark out the most



striking features of the thing in relation to man. e.g. 'orebh, "black one," raven (Dt. 5:11),¹⁴ 'arbeh, "abundant one," locust (Jdg. 6:5, 7:12). This class of evidence may therefore be very valuable.

The fifth constraint complements the previous one. This is the available biological evidence. This comprises both the lists of species which are found in the Bible lands (here primarily Egypt, Sinai and Palestine) and the available information on their characteristic behavior, ecology, etc.

Sixth, there is the available archeological evidence. The major sources of information on the animals of the Bible lands are, of course, the lists and discussions which deal with the animals *found there today.* It is therefore important to know whether these give us a true picture of the fauna of Moses' day.

Bodenheimer¹⁵ has analyzed the archeological evidence and come to the reassuring conclusion that throughout the historical period the fauna has remained basically unchanged; there has been no addition of new elements. There has been, however, a continuous reduction and thinning of the fauna such that many groups are now smaller in numbers and diversity than they were 3,000 years ago. Animals that are now restricted to areas outside the Bible lands (e.g. hartebeests) were then present, sometimes in abundance.¹⁶

The final—and most important—constraint is the structure of the lists. A major defect of modern exegesis has been the general failure to judge the Hebrew text in terms of its own principles of structure.¹⁷ When this is done a number of suggested identifications are at once excluded.

An analysis of structure is also important as regards the usage of the term *min* in the lists. If the addition of the phrase "in all its kinds" indicates that the type of life described comprises several kinds, then can we assume that where the phrase is not used we are dealing with a single kind or with a subdivision of a single kind? To answer this question a careful analysis of the structure of the lists must be made.

The Structure of the Lists

The (fuller) Leviticus list distinguishes six groups of animals which are dealt with in order: hoofed animals (11:2-8), water animals (11:9-12), fliers (11:13-19) swarming fliers (11:20-23), beasts (11:27), and land swarmers (11:29-38). These groups are analyzed in Figures 1-5. In the lists, clean and unclean types are distinguished and the larger groups also reveal an ecological sub-grouping.

Within each group or subgroup the animals are listed in descending order of size. This was the usual practice in the ancient faunal lists and it is observed throughout these chapters. In the case of terms which denote several forms it is the most prominent and well-known which determines the place in the list. However it must be emphasized that the size-grading is often approximate and general rather than scientifically exact.

These lists were written to enable all the Israelites to distinguish the clean and unclean animals. Consequently even the order is based on characteristics which allow easy distinction.

In most cases size is the most useful criterion, but when several forms of the same range of size are listed, characteristics other than size will determine the order. In such cases the size-grading will not be exact.

For example the griffon vulture heads the list of unclean birds. This is the commonest large vulture in Palestine and frequently mentioned in the Bible. It is therefore fittingly placed first, though in point of fact the less common lammergeier and black vulture are slightly larger. However in no group is a large animal placed after a distinctly smaller one.

The lists begin with the names of ten clean *behemah* (Deut. 14:4-5). The first three comprise the domestic forms: cattle, sheep and goats; the fourth and fifth comprise the wild forms of the forest and field; and the remainder are the wild forms of desert regions. The phrase "in all its kinds" does not occur and evidently in no case is more than a single kind involved.

There then follows a list of four unclean *behemah* (Lev. 11:4-1; Deut. 14:7-8), arranged into two unequal groups: three animals which do not divide the hoof and one which does not chew the cud. "In all its kinds" does not occur so we may conclude that, in the first group at least, no more than one kind is involved in each case.

Groups which contain only one name present particular problems. In these cases it may be that only one kind is involved, but it may equally be that although several kinds are involved these were difficult to distinguish (usually because of the animals' way of life) and normally were not distinguished.

In the latter case neither a more thorough analysis nor the addition of the phrase "in all its kinds" could serve any practical purpose (remembering again that the purpose of the lists was *not* scientific). It is fairly easy for the biologist to distinguish these possibilities, but since we have no *Biblical* criteria, these one-name groups will be excluded from later consideration.

The bulk of the list—the unclean birds (Lev. 11: 13-19; Deut. 14: 12-18)—presents more problems, but seems to be constructed as follows:

(1) Predatory and scavenging land birds (Lev. 11:13-17a, c; Deut. 14:12-16b).

(2) Long-toed marsh birds (Lev. 11:18a; Deut. 14:16c).

(3) Short-legged water birds (Lev. 11: 17b, 18; Deut. 14:17).

(4) Long-legged water birds (Lev. 11:19a, b; Deut. 14:18a, b).

(5) Hoopoes (Lev. 11:19c; Deut. 14:18c).

(6) Bats (Lev. 11:19d; Deut. 14:18d).

Groups (1), (3) and (4) list several types of bird and in two of these groups the phrase "in all its kinds" occurs. Evidently the other types comprise only one kind or a lesser division. Groups (2), (5) and (6), however, contain only one name and we can come to no conclusion, based on Biblical evidence. However the diversity of Palestine bats would certainly seem to comprise more than one kind, although the habits of bats have always meant that it is very difficult to distinguish them in the field.

The next part of the list covers clean insects (Lev. 11:22). The definition of these ("flying swarming things that go upon all fours" and "which have legs above their feet with which to leap over the earth" Lev. 11:20-21) restricts us to the Saltatoria (Orthoptera) - the locusts, grasshoppers and crickets. As in all the groups of the lists, the order is from large to small.

The first name occurs 24 times in the Old Testament in contexts which leave no doubt that it denotes the large migratory locusts (with wing spans up to 15cm). The fourth occurs five times, usually in contexts which emphasize its smallness. It would include the small locusts.

The other two are hapax legomena and so constitute a special difficulty. They presumably cover the remaining *Saltatoria* — crickets and longhorned grasshoppers. In each case more than one kind is said to be embraced by the name.

The final section of the list deals with the unclean land swarmers and contains three unequal groups: the small carnivores (Lev. 11:29); the small rodents (Lev. 11:29) and the lizards (Lev. 11:29-30). Since the first two contain only one name we can come to no conclusion regarding the kinds involved. The third group, however, has six names of which the first bears the phrase "in all its kinds." Thus in the other cases we may assume that only one kind is involved.

Conclusion

Min is a strict classificatory term. It denotes definite "units of creation" and not simply that "like begets like."

The different *min* are genetically unrelated.

The Mosaic lists of clean and unclean animals do permit an analysis of the limits (or taxonomic extent) of the min.

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⁸Delitzsch and Gesenius argue that *leminehem* (Gen. 1:21) is plural "according to their kinds." Such in-deed is the *Oere* (the text to be read. as "vocalized" by Massoretes), but the Kethib (the text as written in the Hebrew consonantal script) is singular. The latter is undoubtedly correct. ⁹Cf. the general use of singular nouns to express kinds

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