

2000 TGF Bible Conference
THE COMPLETE MINISTRY OF THE 144,000
**Israel's Remnant in the Prophets as the
Great Priest-Army of the Third Generation**

Session III • Saturday, 10 a.m. • 25 November 2000

James Hilston

0. Objective.

This session develops from the prophets that the Remnant of Israel's Elect in the Land in the Third Generation is the great Shekhinah-empowered Priest Army of Jehovah, the Army of Saviors, that conquers the Land as originally promised to Abraham and in accordance with the template established by Israel's First Generation. Starting at the cleft of Mount Olivet in that Day, this Remnant marches, conquering the land given to Abraham, and doing away with all of those who do not declare Jesus of Nazareth as Messiah. This great climax of planetary history is the mother of all sacrifices.

I. Introduction.

There is a myth amid Christendom that somehow the Israelites were a "primitive" people who needed tangible illustrations and figurative language to explain otherwise difficult concepts about God's nature and character. Furthermore, a prevailing notion is that they were not very bright overall. With the exception of a few deep thinking and spiritual men, the Jews are regarded as somewhat lacking in intellect. While it is true that the sacramental laws and the figurative language did indeed illustrate (even emphasized) various aspects of God's nature and character, the Israelites understood that God intended to communicate profound and pervasive prophetic symbolism in their rituals and writings.

One such topic is that of the Remnant of Israel. With strong symbolism and figurative illustrations, the Prophets describe a specific portion of Israel's future people, the purpose and ministry of which we will examine in detail.

II. The Prophets and prophecy

A. Biblical Prophecy and the Normative Hermeneutic

1. Unless the context of a passage or of parallel passages requires otherwise, normative usage of a word, phrase, grammatical construction, or figure of speech shall obtain. The burden of the proof is on the exceptional usage.

2. The Law of Precedence: Of particular importance in the discussion of prophetic scripture is the law of precedence.

a. Original audience, recipients: Older revelation was to be interpreted and understood in its own right by the normative hermeneutic by the original hearers/readers. Newer revelation was never to contradict older revelation and was to be understood according to older revelation.

b. Later readers: Ergo, modern readers of the scriptures must interpret and understand older revelation in its own right before newer. Newer revelation must be understood in the light of older revelation and never the reverse.

c. Regarding prophecy: Older prophecy must be understood in its own right. This then sets the framework for incorporating newer revelation on the same subject. This is precisely our task in this session.

B. The People.

De 33:29 Happy art thou, O Israel: who is like unto thee, O people saved by the LORD, the shield of thy help, and who is the sword of thy excellency! and thine enemies shall be found liars unto thee; and thou shalt tread upon their high places.

De 4:7,8 26:15 2Sa 7:23 Ps 33:12 144:15 Isa 45:17

C. The Land.

1. The Land promise. Recall from the first session that a tract of land is promised to the nation of Israel ("the land which I swore unto Abraham, to Isaac, and to Jacob ..."). Ge 50:24 Ex 6:8 33:1 Le 26:42 Nu 32:11 De 1:8 6:10 9:5 30:20 34:4

2. The Hope of Israel. For the elect of Israel, this promise is their hope. For the reprobate, this promise will entail their destruction.

- a. Promise to the remnant Isa 1:19
- b. Judgment to the reprobates Isa 1:20

D. The Day of the Lord.

"The Day of the Lord," refers not to a mere 24-hour solar cycle, but rather a time period in Israel's future when God's wrath is unleashed upon His enemies and His chosen people are secured in their Land. This Day is variously called:

1. "**The Day of the Lord.**" Isa 2:12 13:6,9 34:8 Jer 46:10 Eze 13:5 30:3 Joel 1:15 2:1,11 3:14 Am 5:18,20 Ob 1:15 Zep 1:7,14 Zec 14:1
2. "**The Day of the Lord's wrath.**" Even paleo-gentiles, such as Zohar, one of Job's mockers, knows of that future day in Job 20:28 Also see Ps 110:5 Pr 11:4 Eze 7:19 Zep 1:18
3. "**The Day of the Lord's vengeance.**" Isa 34:8
4. "**The Day of his fierce anger.**" Isa 13:13 Zep 2:3 3:8
5. "**The Day of trouble.**" Ps. 50:15
6. "**The great and terrible Day of the Lord.**" Joel 2:31
7. "**In those days and in that time.**" Joel 3:1
8. "**Days of visitation.**" Isa 10:3 Hos 9:7 (cf. Ex 32:34)
9. "**Day of his wrath.**" Ps 110:5 Pr 11:4
10. "**In that Day.**" Isa 4:1,2
11. **Day of darkness and mourning.** Amos 8:8-10 Isa 60:1,2 Joel 2:2
12. "**The acceptable year of the Lord, the day of vengeance.**" Isa 61:2
13. **The time frame of the Day of the Lord.** Ezek 39:9 Dan 7:25 9:2,24 12:7,11,12 Lev. 25:8

E. The Remnant.

The various Hebrew words translated "remnant" may refer to several distinct groups of people (and sometimes, non-people), the specific meaning of which is always determined by context. It may be used to refer to a remnant in a positive or negative sense, both of the nations and of the Nation, Israel.

While it most often refers to the Jewish elect, i.e. to the ingathering of diaspora of Israel, there are particular cases where the description and identity of the remnant is more specific, a company of people having a special purpose in prophecy, namely "the daughter of troops." Mic. 5 esp. vv. 7,8.

Another aspect of its significance relates to the fact that reprobate Jews (those not sealed according to Ezekiel 9:4, see below) will be destroyed by the northern army, the enemies of Israel through whom God wreaks havoc on the rebellious nation. It is crucial that the distinction be maintained between the pagans whom God chooses to afflict the reprobated of the nation, and the Army of Vengeance through whom He will cleanse the Land and reclaim Zion.

F. The overall scenario.

Consider the following: We have ancient writings, the Scriptures, which claim to be the words of Jehovah. They are written to and about a particular and distinctive people, Israel, regarding whom, we read of the paramount importance and inextricable significance of their promised land and all that pertains to it. Throughout the Pentateuch and historical books, we read about their origin, their law, their leaders, and of their relationship to their God. Often, there are references and pointers to a future time, seen both in prophetic words and in the very ceremonies mandated upon them. In the books described as "The Prophets", we encounter unmistakably distinctive prophetic language and explicit references the Day of the Lord, as we already seen. It is explicit that Jehovah has a clear purpose and future for His people that will be preceded by destruction of the reprobate Jews, the great slaughter of Jehovah's enemies, and a time of darkness and cataclysmic events. We now turn to the instruments of that destruction, the daughter of troops, the Remnant by whom God will execute vengeance in anger and fury upon the nations. (Mic. 5:1,15).

III. Identifying the Remnant of the Day of the Lord

A. Daughter of Zion, of troops (His troop)

↓ Micah 4:13 -5:1 Amos 9:6 "His troop"

B. "A fire ... which shall devour ..."

Amos 1:3,7,10,12,14 (esp. v 14 "in the day of battle") 2:2,3 (Note: the latter part of Amos 2 (vv. 4-16 refers to God's judgment upon the reprobates of Israel and not to the remnant)

C. The sword of the Lord. Isa 34:1-8

D. A threshing instrument. Isa 41:15,16 Mic 4:12,13

E. A great people, His army, His camp.

1. A great people, and strong. Joel 2:2 "the like of which hath never been, nor shall ever be."

2. His camp. Joel 2:11

F. Army of saviors. Obadiah 17-21

G. The mourning ones. Zech. 12:10-12 Eze 9:4

H. The Governors of Judah. Zech 12:5

I. A "Priest-Army". Indicated by their mourning over the sins of Israel. Joel 1:9,13,16 2:17.

IV. Supernatural empowerment of the Great Priest-Army

A. Presence of Shekhinah (Joel 2:3, Ob 18, cf. Zech 2:5 12:8 14:4,5 (His feet = "all the saints" (holy ones, angels).

B. The angelic empowerment of the Remnant • Scorched earth warfare.

1. Angelically sealed Ezek. 9:4.

2. Angelically nourished under Shekhinah-Cloud (Zech. 14:5-7 Mic 5:4)

3. Angelically preceded by Shekhinah-Cloud (Joel 2:11)

a. Fire before. Ps 50:3 59:13* 104:31-35* Ob. 18 Joel 2:3,5 Zech 12:5 13:9 Isa 47:14.

Recall the pillar of fire (Shekhinah) above the ark (mercy seat) of the covenant. The flaming fire of God's wrath is the empowering presence of Shekhinah.

b. Devouring fire. Hosea 8:14. Cf. Ex 24:17 Nu 26:10 Ps 50:3 Isa 29:6

c. The earth quakes before them. Joel 2:10 Evidence of the presence of angelic power. It is remarkably consistent to find angels and earthquakes and earthquakes occurring together. Ex 19:18 1Sa 14:15 1Ki 19:11,12 Isa 29:6 Joe 2:10 Na 1:5 Mt 27:51 27:54 28:2 Ac 16:26 Re 6:12 8:5 11:13,19 16:18

- d. **The voice of the Lord** is uttered before His army (Joel 2:11)
4. **Physical prowess.** Angelically empowered by Shekhinah Isa 34:4,5
- a. **Impervious**
- a.1. As a strong people in battle array. Joel 2:5.
 - a.2. Cannot be wounded. Joel 2:8
 - a.3. Cannot be tired. Is. 40:28-31.
- b. **Unstoppable.** Isa 41:12. Compare to locust description in Appendix 1.
5. **Modus operandi.**
- a. **March in ranks.** Joel 1:4 2:7,8.
- Pr 30:27 The locusts have no king, yet go they forth all of them by bands
- a.1 **See Appendix 1** • Locusts.
 - a.2 **See Appendices 2, 3** • First generation Israel.
 - a.3 **See Appendices 4, 5** • Roman battle formation v. Army of Vengeance
- b. **Angels blow trumpets of war.**
- Joe 2:1,15 Amos 2:2 Zep 9:14. Cf. Ex 19:13-19.
- b.1. **Trumpets used in battle.** Other references.
- Joshua at Jericho Jos 6:4-20
 - Gideon. Spirit blows trumpet Jud 6:34
 - Trumpet sounds; troops shout "The sword of the Lord!" Jud 7
 - Trumpet sounds; the Lord fights for us Neh 4:20
 - Levites blew trumpets. (ARK CARRIERS)

Nu 10:9 And if ye go to war in your land against the enemy that oppresseth you, then ye shall blow an alarm with the trumpets; and ye shall be remembered before the LORD your God, and ye shall be saved from your enemies. 10 Also in the day of your gladness, and in your solemn days, and in the beginnings of your months, ye shall blow with the trumpets over your burnt offerings, and over the sacrifices of your peace offerings; that they may be to you for a memorial before your God: I am the LORD your God.

Nu 31:6 And Moses sent them to the war, a thousand of every tribe, them and Phinehas the son of Eleazar the priest, to the war, with the holy instruments, and the trumpets to blow in his hand.

- c. **Angels direct troops via trumpet signals.** 1Sa 18:3 Jer 4:21 6:1.
- c.1. **See Appendix 7** • Signalling and Communication
 - c.2. **Trumpets blown before the ark** (in the presence of angels). 1Ch 15:24-28 16:6 2Ch 5:12,13 (Shekhinah fills the temple).

Question: The Levites would normally carry the ark into battle and blow trumpets in the presence of the ark and Shekhinah. In the prophetic battles, the Army of Vengeance is without the ark and the angels are blowing the trumpets, directing the troops. The question is then, what are the Levites doing?

- d. **"Thresh" with the sword.** Mic 4:12,13 5:6 Hos 7:16 13:16 Amos 9:1,4,10 Zech 12:3 Isa 41:15,16. Recall "the Sword of the Lord"
- d.1. Plowshare => swords • Pruninghooks => spears. Joe 3:10
 - d.2. Cf. Plowshare => swords • Pruninghooks => spears. Isa 2:4 Mic 4:3
 - d.3. See Appendix 1 • Locusts. Contrast "solitary" vs. "gregarious" phases
- e. **"by fire and by His sword."** Angelically-empowered. Isa 66:16,17.
- f. **"destroying weapon."** Ezek 9:1 "slaughtering weapon(s) v. 2.
- g. **"treadeth down ... teareth to pieces."** 4:13 5:8.
- h. **"nothing shall escape them."** Joel 2:3.

6. Appearance

- a. **As a herd of horses** (Joel 2:4)
- b. **Fire, flame, before and behind.** Angelic presence upon and all around the troops. There is no ark, no mercy seat. The Shekhinah's presence encompasses the entire rank and file.
- c. **Small in number.** Amos 5:3 9:8–10, Zech. 13:8, Ezek. 9.

7. Sound

- a. Like the noise of chariots Joel 2:5.
- b. Like the noise of flame devouring stubble. Joel 2:5 Stubble refers to Esau, i.e., representative of reprobate gentiles cf Ob 18.
8. **Advance of the troops** • full frontal assault. See Appendix 3.
 - a. Run like war-horses on the tops of mountains. Joel 2:4,5 cf. Hab 1:8 re: Chaldeans.
 - b. "Like mighty men." Simile denotes "mighty men" as referring to angels Zech 10:5,7
 - c. Climbing walls "like men of war." Simile denotes "men of war" as referring to warrior angels.
 - d. Run to and fro in the city. Joel 2:9
 - e. Run upon the walls. Joel 2:9
 - f. Climb into houses, enter windows as thieves. Joel 2:9
 - g. March without breaking rank. Joel 2:7
 - h. Every man in his place. Joel 2:7,8
 - i. Do not thrust each other Joel 2:8
 - j. Ground soaked with blood. Isa 34:7

V. Campaign of the Priestly Remnant

A. Preparation. Zech. 14: 1–5

1. Mourning

- a. Sigh and cry for all the abominations of the Nation. Eze 9:4.
- b. Each tribe mourns ("every family apart") Zech 12:10-12
- c. Priests lament, mourn in sackcloth Joel 1:8-13 Isa 61:2,3

2. Beat plowshares into swords, spears into pruninghooks. See above.

3. Sealing of the mourning ones. Eze 9:4. Compare to "destroyer" in pre-Exodus Egypt. Those sealed via blood on doorposts/lintels, are spared Ex 12:22,23.

4. Flee into the cleft of Mount of Olives. Zech 14:4,5

B. Geologic catastrophism. Recall point about angels and earthquakes. Also scorched earth and devouring fire. Continues throughout Army's campaign

1. Mountains melt, valleys cleft. Amos 9:5,13 Mc 1:4, 6
2. Reprobate say to the mountains, "Cover us ... fall on us." Hosea 10:8
3. Other references. Isa 40:4 Zech 14:10

C. Angelic destruction of the reprov'd in the city and the sanctuary Beginning at the sanctuary and in the city Eze 9:6,7.

D. Troops deploy, east toward the Euphrates: Out of the cleft, proceed to Babylonia Mic 4:10-13

E. Turn northwest. Assyrian regions. Mic 5:6.

F. West. across the northern border of Abraham's hope

1. "out of the east and out of the north" Dan 11:44.
2. "out of the land of the north" Jer 3:18.

G. Engage enemies of God at Megiddo. Dan. 11:44.

H. Final battle: Saviors on Mount Zion Ob 21

1. Drive all reprobates into the valley.

- a. The valley of Jehoshaphat Joel 3:2 (OR KIDRON)
 - b. The valley of decision Joel 3:14
 - c. Mic 4:12,13 "threshing floor"
 - d. Gather and assemble the nations to pour upon them fierce anger Zep 3:8
- ##### 2. Final sacrifice. Joel 3, "The Day of the Great Slaughter" Isa 30:25, Zeph 1:8?
- a. Every reprobated Jew is sacrificed. Isa 33:14 Amos 9:10 cf Zech 11:6.
 - b. Every reprobated Gentile is sacrificed (Joel 3:2; 13-14 Ob 18 Zech 12:9 14:2,3)
 - c. 7 months to bury the dead Ezek. 39:9-16 (vs. 12)
 - d. The carcasses and ashes in the Valley of Kidron (Jer 31:40)

3. Purification of Zion.

Obadiah 21 Cleansing of the sanctuary Dan 8:10-14 11:31 Amos 9:9

VI. The experience of the reprobates

- A. All reprobates Jews perish. Amos 9:9,10
- B. All reprobated Gentiles perish. Isa 60:12 (nations driven into valley, see above)
- C. Sow the wind, reap the whirlwind. Hos 8:7
- D. People shall be much pained, faces turn pale. Joel 2:6.
- E. Trampled, beat to pieces. Mic 4:13
- F. Waste ("eat up") the land of the Assyrians, of Nimrod (Babylonia) Mic 5:5-7
- G. As a lion among flocks of sheep. Mic 5:8 "teareth to pieces, and none can deliver." See also Hos 13:7,8. Compare to Eze 9 weapons for cutting to pieces.
- H. No one can escape. Joel 2:3.
- I. Tread down enemies in the streets. Zech 10:5.
- K. Riders on horses shall be confounded. Zech 10:5.
- L. Smite every horse with astonishment, his rider with madness. Zech 12:4
- M. Smite every horse of the people with blindness. Zech 12:4.
- N. The house of Esau. ("there shall not be any remaining of the house of Esau")
- O. Devour all the people, on the right hand and on the left. Zech 12:6
- P. Flesh shall consume away as they stand, eyes shall consume away in their sockets, tongue shall consume away in their mouth. Zech 14:12
- Q. Fire shall burn them like stubble. Isa 47:14

VII. The correlation of the Army of Vengeance and the festal calendar

Recall the opening paragraph in which the point was made that Israel understood the prophetic significance of their ceremonial law. In the details of their rituals, the Israelites could see the structure of God's decrees with respect to their Messiah and their covenant Hope. Borrowing from Steve Rodabaugh's study on the 7 feasts of Moses, consider the prophetic correlations:

A. First festal period.

1. Passover ~ Sacrifice of Messiah
2. Unleavened bread ~ Burial of Messiah
3. Firstfruits ~ Resurrection of Messiah

B. Second festal period. Weeks/Pentecost ~ Apostleship of the Twelve, period between resurrection and Pentecost, pentecostal ministry of the Twelve

C. Third festal period.

1. Trumpets ~ Proclamation of the Kingdom gospel in the 3rd generation
2. Atonement ~ Ministry of the two witnesses, sabbath rest of 144,000
3. Booths/Tabernacles/Harvest ~ Warfare of the 144,000, ingathering of Elect Israel

D. Prophetic significance. As it has been shown in the details compiled above, pre-NT students of the scriptures would have been able to make the correlations between the third festal period and the events prophesied in the Prophets pertaining to this great Priest-Army. However, according to the law of precedence, details found only in the NT scriptures, such as the numbers and identities of the extant tribes, would not have been available or discernible by the original hearer/reader.

VIII. Israel in the Land. Amos 9:14,15 cf. Zech 2:10,11 12:6 14:11

- A. Beat swords into plowshares. Mic 4:3-5
- B. Israel will possess the Gentile nations. Ob 17 Isa 14: Amos 9:11
 - 1. Southern tribes shall possess the mount of Esau. Ob 19
 - 2. Tribes of the plain shall possess the Philistines. Ob 19
 - 3. Israel shall possess the fields of Ephraim, and the fields of Samaria. Ob 19
 - 4. Benjamin shall possess Gilead. Ob 19
 - 5. Israel shall possess the Canaanites unto Zarephath. Ob 20
 - 6. The captives of Jerusalem (in Sepharad) shall possess the cities of the South. Ob 20
 - 7. Israel will possess the remnant of Edom. Amos 9:11
- C. Nations will flow into Jerusalem to worship. Mic 4:2,3 Isa 60:3 66:23
- D. Truth to Jacob, mercy to Abraham, which Thou hast sworn ... Mic 7:16-20
- E. Consolation of Israel. Jer 3:14-18 31:31-40
- F. Post-cleansing restoration. Joel 2:23-25 (*great army*)
- G. The nations serve Israel. Isa 61

IX. Conclusion.

From the testimony of the prophets it is clear that Israel's future involves a specialized remnant, set apart for the purpose of securing the Land promised to their forebears. Moreover, this remnant is viewed as a superhuman, priestly, angelically empowered company of people, through which Jehovah vanquishes His enemies and establishes the borders of Israel's inheritance. We further see how the Old Testament scriptures may be understood in their own right, to which further detail may be added by later revelation, enabling the diligent student of the scriptures to avoid the errors that result from interpreting the scripture in a backward fashion, i.e., attempting to understand the OT by way of the NT, thereby violating the law of precedence.

Contrary to the charge that the Mid-Acts doctrine is one which artificially destroys the unity and continuity of the Bible, the Pauline framework rather derives an eschatology that demonstrates the almost ineffable wonder of the Word of God as both a historical and a prophetic document. Indeed, the Mid-Acts framework and understanding of scripture is the grand unifying principle of Biblical history and eschatology. Not only are apparent contradictions and so-called "problem texts" answered, there is set forth the overarching unity of the Bible, further confirming its inerrancy and perfection as the inspired Word of God. Verily, this could only be result of the grand design and providence of the sovereign omnipotent God.

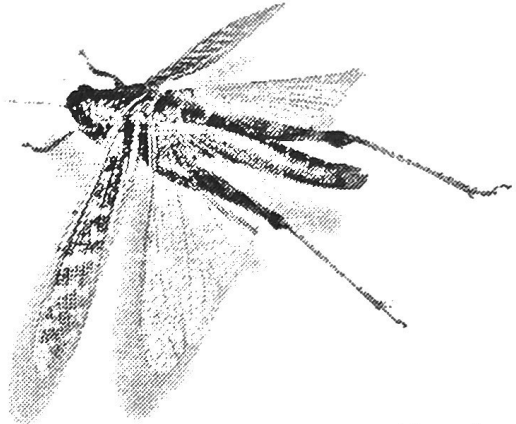
Appendix 1 • Locusts

Order: *Orthoptera*

Family: *acrididae*

Number of species: 10,000

Source: *Insects, Spiders and Other Terrestrial Arthropods*, Ann Kay, Ed. 2000 Dorling Kindersley Limited, London



"Locusts are really short-horned grasshopper which have become strongly gregarious under certain conditions. The female Desert Locust lays several batches of about seventy eggs beneath the surface of the sand, where they remain for about twenty days, depending on temperature. During this time the vegetation above the ground is also growing, so that by the time the eggs are ready to hatch there is an abundance of food for them.

"On hatching, the hoppers wriggle to the surface, where the heat of the desert sun stimulates them into activity and they start feeding on leaves and grasses. During these early stages their future is determined. If there is ample living space, and they are not forced together in overcrowded environmental conditions, they develop into the solitary phase, living like grasshoppers in the area in which they were born, and not forming swarms. Locusts in this solitary phase can be distinguished by their light-green color.

"But if conditions are crowded, the gregarious phase develops and the hoppers become darker in color, collecting in **bands** which grow larger and larger as they are joined by other unnurtured malcontents. About thirty days after hatching these hoppers molt for the last time, to become winged adults, and their swarming begins.

"Swarming locusts are not only changed in color, but they are structurally different, with wings and hind legs longer than those of their solitary counterparts. Until this was determined by entomologists, the locust in each phase was regarded as a separate species."

Source: *Borne on the Wind: The Extraordinary World of Insects in Flight*, Stephen Dalton, 1975 Readers Digest Press New York pp. 86-87

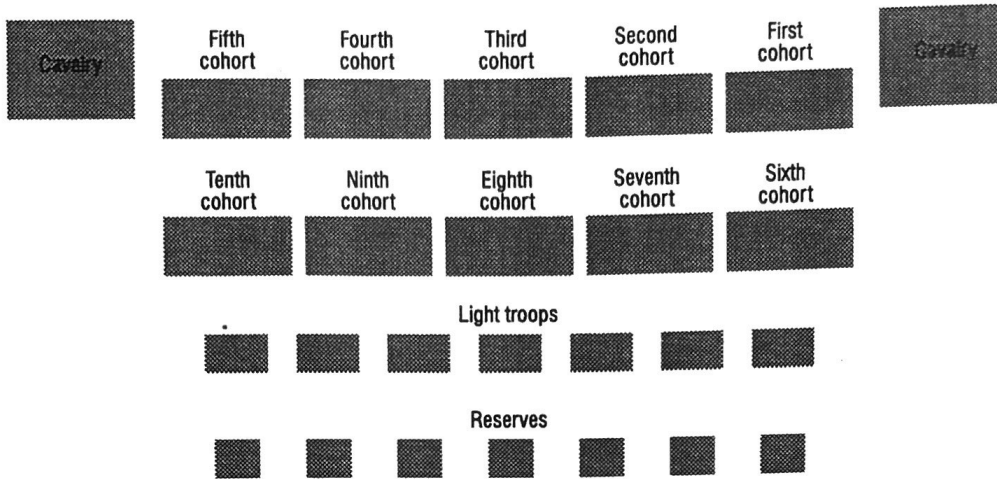
Schistocerca gregaria, the **African Desert Locust**, is one of the world's most destructive insects. Vast swarms can devour up to 100,000 tons of food in a day. Length: 3/8"-3 1/4" (most 5/8"-1 1/4")

"Vast bodies of migrating locusts, called by the orientals the armies of God, lay waste the country. They observe as **regular order, when they march, as an army**. At evening they descend from their flight, and form, as it were, their camps. In the morning, when the sun has risen considerably, they ascend again, if they do not find food, and fly in the direction of the wind (Prov. 30:27 Nah. 3:16, 17). They go in immense numbers (Jer 46:23), and occupy a space of ten or twelve miles in length, and four or five [miles] in breadth, and are so deep that the sun cannot penetrate through them; so that they convert the day into night, and bring a temporary darkness on the land (Ex 10:14-15 Joel 2:2, 10). The sound of their wings is terrible (Joel 2:5). When they descend upon the earth, they cover a vast track of foot and a half high; if the air is cold and moist, or if they be wet with the dew, they remain ... till they are dried and warmed by the sun (Nah 3:17). Nothing stops them. They fill the ditches which are dug to stop them with their bodies, and extinguish by their numbers the fires which are kindled. They pass over walls and enter the doors and windows of houses (Joel 2:7-9). They devour everything which is green, strip off the bark of trees, and even break them to pieces by their weight (Ex 10:12-19 Joel 1:4, 7, 10, 12, 16, 18, 20 2:3)." *The New Unger's Bible Dictionary*

"Once developed, a locust plague is **almost impossible to stop or control**."— Britannica.com

"The size and destructiveness of a large locust swarm are tremendous. Many cover 100 sq. mi. while in flight; some have been estimated to cover as much as 2,000 sq. mi. It has been reliably reported that total coverage of the desert locust swarms that invaded Kenya in January 1954 was 500 sq. mi. An outbreak of desert locusts weighing approximately 50,000 tons and eating their own weight in green vegetation daily while growing or migrating occurred in Somalia in 1957." *Encyclopaedia Britannica*

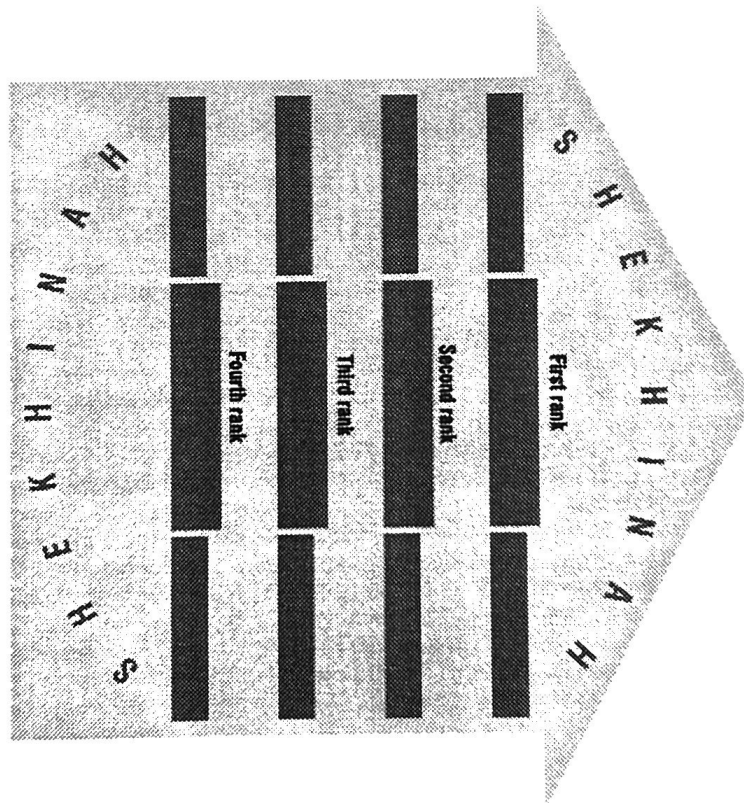
Appendix 4 • Roman marching formation



Source: Thinkquest.org

James Hilston/Trinity Grace Fellowship

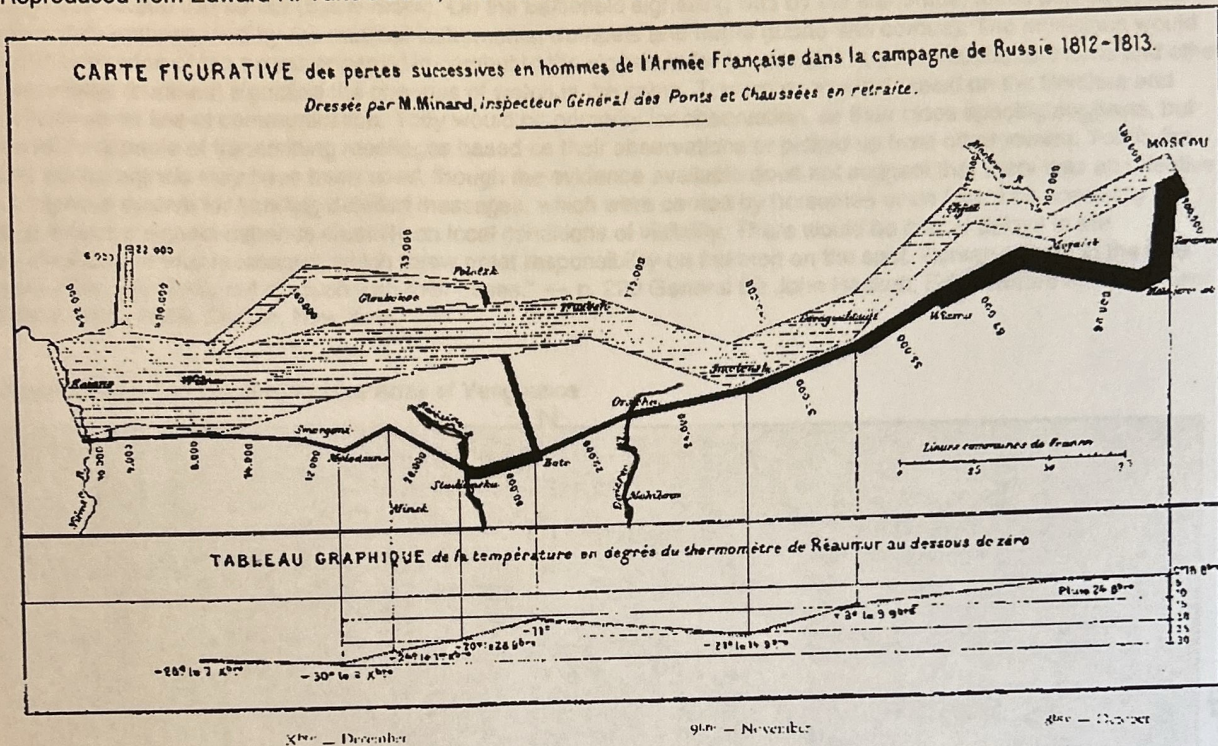
Appendix 5 • The marching formation of the Great-Priest Army



James Hilston/Trinity Grace Fellowship

Appendix 6 • Napoleon's March to Moscow, War of 1812

Reproduced from Edward R. Tufte's book, *The Visual Display of Quantitative Information*, p. 40-41.



E.J. Marey, *La Methode Graphique* (Paris, 1885), p. 73. For more on Minard, see Arthur H. Robinson, "The Thematic Maps of Charles Joseph Minard," *Imago Mundi*, 21 (1967), 95-108.

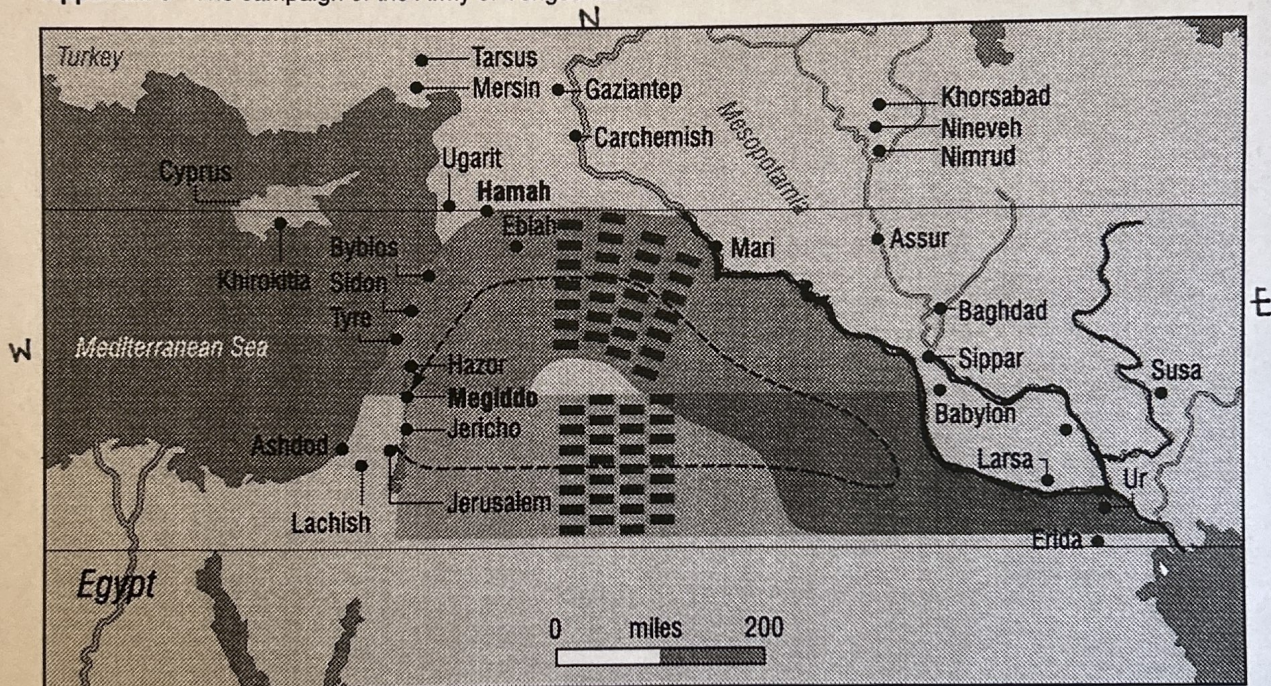
Describing Minard's graphic (above), Edward Tufte, Yale professor of statistical evidence and information design, writes:

"The first is the classic of Charles Joseph Minard (1781-1870), the French engineer, which show the terrible fate of Napoleon's army in Russia. Described by E. J. Marey as seeming to defy the pen of the historian by its brutal eloquence, this combination of data map and time-series, drawn in 1861, portrays the devastating losses suffered in Napoleon's Russian campaign of 1812. Beginning at the left on the Polish-Russian border near the Niemen River, the thick band shows the size of the army (422,000 men) as it invaded Russia in June 1812. The width of the band indicates the size of the army at each place on the map. In September, the army reached Moscow, which was by then sacked and deserted, with 100,000 men. The path of Napoleon's retreat from Moscow is depicted by the darker, lower band, which is linked to a temperature scale and dates at the bottom of the chart. It was a bitterly cold winter, and many froze on the march out of Russia. As the graphic shows, the crossing of the Berezina River was a disaster, and the army finally struggled back into Poland with only 10,000 men remaining. Also shown are the movements of auxiliary troops, as they sought to protect the rear and the flank of the advancing army. Minard's graphic tells a rich, coherent story with its multivariate data, far more enlightening than just a single number bouncing along over time. Six variables are plotted: the size of the army, its location on a two-dimensional surface, direction of the army's movement, and temperature on various dates during the retreat from Moscow.

Appendix 7 • Signalling and communications

“... problems for this army of nearly half-a-million (500,000) men spread over frontiers of a total length well in excess of 10,000 kilometres (6,200 miles). On the battlefield signalling was by the standards, those carried by the individual centuries, and by the musical instruments, trumpets and horns (tubae and cornua). The musicians would call the attention of the troops engaged in combat to the signals to be transmitted by the standards. Horns and other instruments (bucinae) signalled the changes of watch in the camp. Towers were widely used on the frontiers and sometimes on line of communication. They would be primarily for observation, as their close spacing suggests, but would be capable of transmitting messages based on their observations or picked up from other towers. Torch, fire and smoke signals may have been used, though the evidence available does not suggest that there was an effective semaphore system for sending detailed messages, which were carried by horsemen or on foot. The possibility of long-distance signals depends crucially on local conditions of visibility. There would be critical delays in the transmission of vital messages, which threw great responsibility on the men on the spot. Roman armies in the field were often effectively out of touch with their bases.” — p. 220 General Sir John Hackett, Ed., *Warfare in the Ancient World*, 1989, Facts On File, New York.

Appendix 8 • The campaign of the Army of Vengeance



Base map source: Hackett, *Warfare in the Ancient World* S

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