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**Section 1: Antiquity** 

THE LEVANT

Gabriela Bijovsky

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General bibliography and collections.

Since the last edition of the *Survey of Numismatic Research* six years ago, numismatic research of the Southern Levant has significantly flourished. Besides the numerous synthetic monographs and articles covering numismatic research from the Persian, Hellenistic and Roman periods (for Ptolemaic and Seleucid coinage see respective separate sections), a significant number of numismatic reports from archaeological sites have been published, which—based on coins from known provenances—provide a major contribution to research. In addition, the appearance in 2006 of a new numismatic journal, the *Israel Numismatic Research*, has contributed extremely to the study of coinage in the region. This survey aims to be a comprehensive summary of numismatic literature published during the last six years and to serve as a basic tool for scholars and numismatists dealing with coinage of this region. The author is however aware that discussion of some issues might be missing here and apologizes for any bibliographical items which may have been overlooked from this survey.

Before referring to the detailed numismatic literature by specific sections, a number of general and very useful studies should be mentioned here. A comprehensive bibliographical revue of numismatic literature on Persian and Hellenistic coinage by DUYRAT (1) discusses subjects such as methodology, mints and monetary circulation, synthetic papers, typology, hoards and autonomous issues. Also worthy of mention is ELAYI AND LEMAIRE (2) second bulletin of coins from Syria, Phoenicia and Palestine (1999–2002) with full commentaries on new literature and coin types based mainly on coins from the market (auction catalogues; very few finds in situ). This bulletin stresses an influx to the market of Philisto-Arabian coins. Both bulletins (together with the one published in 1999, *Transeuphratène* 17:117–153) comprise a total of about 3,040 coins and 801 additional pieces in auction catalogues).

YASHIN (3) published recently his private collection of coins from the southern mints of Ascalon, Gaza, Raphia and Anthedon, dated from the Persian to the Roman periods. The catalogue includes short introductions to the mints.

## Hacksilber and 'coinage before coins'.

This issue has been extensively discussed during the last years by a number of Israeli scholars, and there is still no consensus whether these finds should be already considered as

coinage. According to KLETTER (200, 201) these Iron Age silver and gold hoards (already over 20 such hoards in Palestine) indicate a development towards a monetary economy during the seventh century BCE however, these are certainly not "money" in the sense of coins. A monetary economy became possible when people trusted the guarantee of an issuing authority and this fundamental principle was not part of the world in the seventh century. In reaction to this theory, SILVER (207) stresses that the use of sealed purses as large denomination coins were used as currency in the ancient Near East. Moreover, GITIN AND GOLANI (199) argue that Hacksilber may be regarded as money in the sense of "change", as several cut silver pieces, jewelry and varia of different sizes and weights together may approximate a weight standard which was not totally replaced by the introduction of coinage. This conclusion is emphasized by GITLER (16), who discusses a hoard from Samaria yielding Hacksilber and cut Athenian tetradrachms. This hoard gives evidence to the prolonged use of the practice of Hacksilber until the second half of the fourth century BCE.

### Phoenicia and Palestine in the Persian Period.

Numerous surveys and studies concerning the different coinages circulating in the area during the Persian period have been published. A number of papers refer to the historical background of Persian coinages, such as Betlyon (4) who analyzes the roles played by Egypt and Phoenicia against Greeks and Persians. Elayi (8) presents an updated chronology of the reigns of Phoenician kings during the Persian Period (539-333 BCE) arranged by cities (Sidon, Tyre, Byblos, Aradus) and she publishes as well a biography of the Sidonian king 'Abd'aštart Ier/Straton (Elayi 7). A collection of papers presented at a colloquium about the Transeuphratène in transition (c. 350–300) was compiled by Lemaire (23). It reviews the political and military events that took place during the transition from the Achemenid to the Macedonian domination, including extensive bibliography and a summary of numismatic finds, archeological, numismatic and epigraphic publications of the last 20 years. SCHAPER (28) discusses the political constitution of the kingdom of Judea during the Persian domination, its economic structure and political-religious hierarchy.

ELAYI AND ELAYI (10) assemble a second update of new Phoenician hoards, an addendum to their main corpus of hoards published in 1993 (*Trésors de monnaies phéniciennes et circulation monétaire. Ve-IVe siècles avant J.-C*).

Several papers pertain to specific Phoenician workshops. The depiction of turtles on coins from Arados is discussed by ELAYI, ELAYI, AND BOUR (14), adding a new variant to the repertoire and dealing with its iconography. Inscriptions found on Tyrian coins were compiled by

ELAYI (9) in a corpus and include legends, countermarks and graffiti which appear on the coins. She concludes that Tyre was the first Phoenician city to introduce inscriptions on its coins and believes that Tyrian engravers were literate.

The workshop of Sidon deserves special consideration. After many years of study, a corpus on the coinage of Sidon (in two volumes)—the first of four comprehensive volumes (Arados, Byblos, Sidon and Tyre)—has been published by ELAYI AND ELAYI (12). The corpus includes 2608 silver and bronze coins from excavations, museum and private collections. It deals with all aspects of coin production: volume of issues, technology, metrology, epigraphy and paleography, graffiti, countermarks, iconography and relative chronology. Sidon introduced a number of innovations, such as the use of circular flans, the 12'h axis orientation and the dating on the coins from 372 BCE regularly. In addition to this book two further articles by the same authors are mentioned here: a paper on the significance of the king and chariot scene, which in their opinion it represents the religious procession of a local deity with the participation of the king of Sidon (11); and an article on the Sidonian coinage of Mazday/Mazaios and its relationship to the civic coinage (13).

A significant number of studies from the last six years considerably enrich our knowledge of Samarian coins, first published by Meshorer and Qedar in the nineties. BODZEK (5) deals with the iconography of the reverse of a Samarian coin depicting a hunting scene with a cavalryman wearing Iranian costume and relates it to the *paradeisos* of Greco-Persian tradition. CHAYA, (6) analyzes the Samarian Greek Gorgoneion coins series and suggests that the coin engraver who did this series was of Greek origin. RONEN (26) adds twenty unrecorded types and varieties, bringing the total number of registered Samarian coins to 258. GITLER AND TAL (19) deal with a coin type presenting the Aramaic legend *Šhrw*. They further present an additional fourteen unpublished Samarian coins and by implementing XRF analysis they show that more than 65% of the coins have a silver value over 92% and significant copper content. Finally, LEMAIRE (22) draws our attention on a double graffito written in paleo-Hebrew that appears on a pseudo-Athenian tetradrachm. On the obverse appears the name "Yawyish'al" (יוישאל) and on the reverse, a "shin" (v) interpreted as the abbreviation of Samaria. The author believes this coin was part of the hoard from Nablus, 1968. One wonders if the name on the graffito was owner of the hoard before it was hidden. FRIED (96) suggests that Samarian coins belonged to the same monetary system as the Cilician and were therefore contemporaneous.

A number of studies are dedicated to the silver coinage of Yehud during the Persian period. GERSON (15) publishes two specimens of a new variant, depicting a king head on the obverse and a 'fat' owl with no olive branch or lily and the inscription '577' (in paleo-Hebrew) on the

reverse. In Gerson's opinion this type reflects the influence of three cultures: Persian, Greek and Jewish. Ronen (25) examines three main features that differentiate Yehud coins from the other coinages minted in the region: the weight standard was based upon the sheqel; there are no Yehud silver-plated coins and Yehud coins continued to be minted during the Ptolemaic period. In addition he publishes two more unrecorded types. Root (27) deals with the weight standard of the Yehud coins, which he also attributes to the Persian sheqel and argues that after Alexander's conquest Attic weight coins replaced the old standard. GITLER, (17) publishes a small hoard of seven Yehud coins and one Philistean obol from Ashqelon from the environs of Ramallah. This hoard is an important addition to the scanty record of Yehud hoards and it provides evidence for the circulation of Philistean coins in the northern border of Judea.

Probably one of the most outstanding studies related to local coinage in the Persian period, is the corpus compiled by GITLER AND TAL on coinage of Philistia dated to the fifth and fourth centuries BCE. This numismatic group, commonly so-called "Philisto-Arabian", was redefined by the authors as "Philistian" coins. These coins were produced by three identifiable minting authorities of the three coastal Philistian cities: Ashdod, Ascalon and Gaza. The book includes a most comprehensive corpus of more than 600 coins representing 311 coin-types (of them 192 unpublished), dealing with iconography, typology, paleography and particularly metal analysis.

Two more new "workshops" deserve special consideration. A so far unknown coinage has been recently identified and published by GITLER, TAL AND VAN ALFEN (21). This group of silver dome-shaped Athenian-styled coins—drachms and obols—is attributed by the authors to the boundaries of Edom, based on coin distribution. Their convex shape is due to the fact that the coins were produced from worn obverse dies with the head of Athena, which were then re-cut and re-polished. This technique was an intentional method of production. QEDAR (24) reviews the coins attributed to king Tissaphernes and puts forward the view that his coins found at Dor—all of them silver-plated—were minted there. The coins bear the portrait of a Persian satrap on the obverse and an owl on the reverse bearing the letters 'BA'.

TAL (29) examines epigraphic material from the fourth century BCE in order to identify the weight denominations and standards of coins in Edom, Judea, Samaria and Philistia. He concludes that the identification of an Attic denominational system and weight standard in Palestine coinages of the fourth century BCE is not likely, and that a local denomination system based on the sheqel and its fractions was preferred.

VAN ALFEN (30) publishes a lot of 76 Athenian-type "owls" and two silver "dumps" which are part of a hoard dated between c.340–330 BCE. The lot contained a mix of probable Attic

(Athenian) issues together with Egyptian and Levantine imitations (including three Gaza coins?). The author describes the late fourth century BCE as a chaotic monetary period, when the "owls" were intensively imitated and there was little means to exercise direct control over their manufacture and circulation.

*Phoenicia and Palestine in the Hellenistic and Roman Periods (and Mints by A-B).* 

As mentioned above, this section deals with general studies regarding the Hellenistic and Roman periods. Ptolemaic and Seleucid coinages are discussed in separate sections that include coin material relevant to the Southern Levant.

A major publication by AUGÉ AND DUYRAT (33) compiles the proceedings of a round table that evaluated Syrian coinage and its contribution to the Hellenistic and Roman history of the ancient Near East. Those communications which are relevant to our discussion will be cited here specifically.

Hellenistic coinage. CALLATAŸ (43) examines the production of civic tetradrachms from Cilicia to Palestine dated from the end of the second century BCE to the first half of the first century BCE. The author makes use of the historical evidence to explain anomalies in coin production. This article includes a catalogue of 2147 tetradrachms from nine mints, and a discussion on an annual study between 110/109 and 53/52 BCE. According to this study only two cities had a regular and continuous production, which constitute two centers or monetary zones: Arados in the north—which grouped around it Seleucia, Laodicea and Tripolis—and Tyre in the south, which grouped Sidon and Ascalon. The author considers these tetradrachms as civic in nature and not autonomous, because their production has been stimulated by external events. DUYRAT (46) focuses specifically on workshops at North Phoenicia which were under control of the mint of Arados (the Aradian Peraea): Gabala, Carne, Marathus, Balanea and Simyra, from the third to the first centuries BCE. He presents a catalogue including 580 silver and bronze coins showing that these cities shared a common religious culture. CALLATAŸ also discusses the application of "Gresham law" to Hellenistic coinage in the region (44). He concludes that during this period, coinage was characterized by the circulation of well-controlled monetary systems leaving place to certain monetary concurrency and free choice by users. While most hoards discovered in North Syria after 300 BCE are homogeneous, hoards discovered in Southern Syria and Palestine present mixed coinage of Attic, Phoenician and Ptolemaic standard. Monetary

circulation is divided according to geographical areas but admits and takes into consideration frontier zones.

Roman Provincial coinage. Remnants of Hellenistic coinage in the region (Syria, Phoenicia, Palestine and Arabia) after the Roman conquest have been analyzed by Augé (35). These remnants are noticeable in various aspects, such as monetary system and coin output, language and imagery (diversity of types). The character of coinage however, changes in order to service the imperial propaganda. This subject is further developed by Burnett (39), who discusses the romanization of Syrian coinage from Pompey to Domitian, and analyzes the coinage by physical appearance, denomination, language and iconography. The author argues that it took time for Syrian coinage to adopt imperial fashions and standards. On one hand the widespread application of Latin on Syrian coinage shows a degree of Romanization, but on the other hand coinage kept its local character. This same issue is examined by BUTCHER (40) who focuses on bronze coins (civic coinage) from the first century BCE to the second century CE from four sites in the Orontes valley: Seleucia Pieria, Antioch, Apamea and Epiphaneia (Hama). He concludes that there was no regular communication between the four cities in order to harmonize the coinages they produced to facilitate economic links, with the exception of the 'SC' coinage, which was accepted in all four cities.

BUTCHER (41) publishes the most comprehensive study today on coinage from northern Syria, which includes a catalog of coins produced by the thirteen mints in the region and the coinage of the kingdom of Commagene. The author tries to place the coinage of Syria in its broader imperial context. This study includes site finds, hoards, countermarks and foreign coins which circulated in the region. The core of the corpus is the mint of Antioch. The book includes chapters on production, metrology, types and legends. The chapter on circulation however, which deals with "Syrian coinage beyond Syria" offers a very brief account of Antiochene coins in excavated sites such as Jerash and Caesarea, which is completely out of date and does not reflect the real scope of distribution of these issues in Israel.

The place of coins from the Decapolis in the broader context of Near Eastern numismatics is discussed by AUGÉ (34). The author re-examines the coinage of these 18 cities under the light of recent archeological discoveries and establishes common characteristics between mints. He analyzes items like coin production, minting activities (local character), complementary production or monetary relationships between cities, legend usages and regional diffusion of characteristic formulas.

A number of studies deal with issues related to Palestine, and more specifically with the province of Judea. AMANDRY (32) discusses the monetary policy of the Flavians in Syria between 69 and 73 CE and focuses on the huge output of precious metal coinage in 70/71 CE served to pay the troops after the Jewish War. The author calculates that five years of the war cost some 38,775 million denarii and that the production of tetradrachms alone would have been sufficient to pay the army. Thus, the surplus was used for the massive victory festivities and for the reorganization of Judea. Kushnir-Stein (51) publishes an updated summary of the eras of 38 cities in Palestine. The city eras denote turning points in the history of these cities: autonomy, restoration as poleis, foundation of new cities, individual and commemorative eras. She argues that the fact that the majority of coins in Roman Palestine were dated, may well reflect local traditions going back to Hellenistic times. In the framework of his dissertation about the site of Gamla, Syon (56) analyzes the monetary influence of southern Phoenician cities: Tyre, Sidon and Akko, on the Galilee and the Golan regions.

A number of studies deal with coinage and iconography. Provincial coins were in fact an expression of identity. Using examples from Syrian civic issues, BUTCHER (42) deals with terms like identity, culture and ethnicity, symbol and meaning of coin types. He evaluates whether the designs were meant to project outwards the community or were destined for internal consumption. BELAYCHE (37) presents an iconographic study of the image of Tyche on city coins in Roman Palestine, analyzing the nature of this figure as a divinity (Fortune goddess) or a symbolic figure, an image. The use of Egyptian iconography is analyzed in two different studies: BRICAULT (38) explores the numismatic evidence regarding the cult of Isis and other Egyptian deities (Serapis, Harpocrates, etc.) in the Roman southern Levant. This cult varies in periods and geographical areas and cannot be generalized. In some cases the coins might provide evidence for a local cult. According to the author only nine cities in Palestine used Egyptian types (especially the colonies Caesarea, Aelia Capitolina and Akko-Ptolemais). Through an analysis of literary and epigraphic sources, monuments and coinage of cities in the Lebanese coast ALIQUOT (31) checks the place of Egyptian and Isiac cults in Phoenician culture. The author focuses especially on the cities of Byblos and Tyre and concludes that although there are testimonies of Egyptization in Phoenicia before Alexander, the main influx of Egyptian elements in architecture and culture arrive only through Hellenization.

Two studies deal with architecture on coins: BARKAY (36) re-examines the gap between the appearance of the Syrian arched gable on architecture and its appearance on coins a century later (from Antoninus Pius onwards), when it becomes most popular on coins from Palestine, Phoenicia and Arabia. CHRÉTIEN-HAPPE (45) analyzes temple compounds depicted on coins

from the Decapolis. The author argues that these representations are above all symbolic and emphasize the depiction of the deity and not the architecture. In a series of papers LICHTENBERGER discusses extensively some iconographical issues on coins from the Decapolis. The author (52) examines the numismatic evidence for cults and sanctuaries in the cities of Hippos, Dion, Abila, Gadara, Capitolias, Nysa-Scythopolis, Pella, Gerasa and Philadelphia, starting from the civic coins which are discussed in the light of archaeological, epigraphic and literary evidence. In a recent article LICHTENBERGER (55) deals with the interpretatio Graeca of deities on coins of the Syrian Decapolis. He discusses the methodological problems of interpretation of the iconographic depiction of deities. Although images often seem Greek or "oriental", the author argues that is impossible to deduce the nature of the deities from the images alone. Most important is LICHTENBERGER's study on city foundation legends on coins from the Decapolis (53). Civic coins served to cultivate local traditions often related to foundation myths. To be accepted into the Panhellenion the cities of the East had to prove their eugeneia. The author refers to foundation myths, some of them related to Alexander the Great in cities of the Decapolis: Nysa-Scythopolis, Gadara, Hippos-Susita and Pella. LICHTENBERGER (54) also analyzes the motif of the emperor's bust on an eagle which appears on some Syro-Phoenician tetradrachms. While in Roman art this motif usually denotes consecration of the emperor, on the Syro-Phoenician coins the emperor is alive. The author discusses the motif, which he traces back to Ptolemaic antecedents and compares it to passages of the Bible and local sculpture in the Levant.

A number of studies are dedicated to technical minting issues. KUSHNIR-STEIN (50) analyzes the use of bevelled edge technique coins to establish a relative chronology and place of manufacture of coins. She relates specifically to coins in Palestine from the closing decades of Seleucid rule until 70 CE, including most of Jewish coins. Among the cities which struck bevelled edge coins are Ptolemais, Demetrias, Gaza and Ascalon and some issues in Nysa-Scythopolis and Gadara. The author attributes the minting of Jewish coins with bevelled edges to the mint of Jerusalem. In two different publications GITLER AND PONTING (48, 49) check the chemical composition of the silver coinage of Septimius Severus and his family and show that this analysis can sometimes help clarifying controversial attributions. For instance, the analysis suggests that an official empire-wide debasement took place in 194, when a bullion content of 46% of silver was fixed throughout the empire. This process lead to the introduction of the radiate coin known as 'antoninianus' by Caracalla 20 years later and the gradual debasement of silver content down to 2% in 270 CE. In addition, the analysis of the denarii attributed to Edesa

and Laodicea shows that these were two separate Eastern mints operating during the civil wars of Severus.

#### Mints.

Aelia Capitolina (Jerusalem). The date of foundation of the Roman colony continues to be an issue in dispute. Two scholars present opposite opinions. KINDLER (72), following Cassius Dio, believes that Aelia Capitolina was founded prior to the outbreak of the Bar Kokhba Revolt. He bases this on three factors: the style of Hadrian's portrait, which from 117 to 130 CE had a tendency to resemble Trajan's portrait; the obverse of Hadrian's inscription that until 134 CE included Trajan's name and the presence of two Aelia Capitolina coins of Hadrian discovered in the el-Jai cave which belong to the earlier types. On the other hand, Tsafrir (80) favors the order of events based on Eusebius, which states that Hadrian declared his will to rebuild Jerusalem during his visit in 130 CE, thus causing the Bar Kokhba revolt. Only after the suppression of the revolt in 135 CE was the city rebuilt as Aelia Capitolina and the name of the province was changed from Iudaea to Provincia Syria Palaestina. Tsafrir believes the coin evidence from the el-Jai cave is not conclusive. The coins from this cave have been published ESHEL AND ZISSU (166). Among the finds are four Bar Kokhba coins and four coins of Hadrian, two of these minted in Aelia Capitolina. The latest coin found there was minted by Hadrian in 133/134 CE in Gaza. According to the authors, Aelia Capitolina was founded in 130 CE and coins were minted there even before 135 CE. The rebels changed the slogan on the Bar Kokhba coins from "Year one for the Freedom of Israel" to "Year two for the Redemption of Israel" as a reaction to pagan coins being minted in Aelia Capitolina.

Akko-Ptolemais. EIDELSTEIN (65) publishes a new variant of Aquilea Severa to a type known under Elagabalus which sheds light on the meaning of the scene depicted on the reverse, identified by the author as a portable shrine. The coin is part of the radiate series struck in 222 to commemorate the royal marriage between Elagabalus and his wife Aquilea.

Arados. In two different studies, DUYRAT (63, 64) discusses the monetary policy of the city and coin production during the Hellenistic period. The former analyzes the production of "alexanders". Arados minted few staters and practically no drachms but mainly tetradrachms, and was the third place in coin production after Lampsacus and Abydos. This is the first study of coin production of a city in Phoenicia. The second study—based on the author's PhD dissertation—proposes "to examine the annual output of the mint and compares it with political and military events disturbing the Seleucid kingdom". The catalogue comprises 4636 coins,

including hoards, and is divided into four sections: the royal alexanders, the emissions of the end of the 4<sup>th</sup> century BCE, the autonomous issues and the coins of Ptolemaic types. In the preliminary coin report of coins from the Civic Center at Petra, SIDEBOTHAM (187) presents two autonomous coins from Arados, dated to the third century BCE. It seems that coins from Arados appear in Nabatean sites along the caravan route between Petra and Avdat, indicating commercial exchanges between the Ptolemies and the Phoenician mint.

Anthedon. Coins from this city are rather rare, only two coins from Anthedon are published in YASHIN's private collection (3).

Ascalon. YASHIN's private collection (3) yields a comprehensive section of coins from this city. KUSHNIR-STEIN (73) publishes a number of so far unknown weights with typical Ascalonian designs (such as the city-goddess) taken from the coins of the city.

*Berytos*. SAWAYA (78) discusses the coins of Octavian bearing the dolphin and trident motifs and connects them to a first installation of veterans established in the city between 29 and 27 BCE. These coins circulated side by side with the local issues. The author believes that socioeconomic reasons led to the founding of the Roman colony of Berytos.

*Bostra*. HOLLARD (69) examines the so-called "provincial" coinage of silver and brass attributed by some scholars to Bostra. The author states that these coins were in fact struck in Rome, Antioch and perhaps Cyrene. Coins minted under Antoninus Pius, in 140–144 in the name of the Legio III Cyrenaica were indeed minted in Bostra, intended to pay the troops with necessary currency. The iconography on these coins is very different from the civic coinage.

*Botrys*. A corpus of the coins from Botrys in Phoenicia compiled by SAWAYA (79), includes only five bronze issues: one civic and four Greek imperial. The author discusses the eras adopted by the city and different aspects of the mint activities, such as the monetary system, its political and economical status, typology and iconography.

Canatha. Donceel (62) published most recently a corpus of coins from Canatha basing his research on coins from public collections, previous catalogues and publications and numismatic finds from the excavations at the site of Qanaouat. The catalogue classifies 238 coins into seventeen groups or coin types from Caligula to Elagabalus.

Damascus. BIJOVSKY (59) suggests a new identification for a reverse type on a coin minted in Damascus under the reigns of Philip Junior, Trebonianus Gallus and Volusian. The scene depicts the metamorphosis of Daphne, a very popular myth in Syria and the iconographical aspects are examined.

Demetrias. HOOVER (71) reinforces Kushnir-Stein's suggestion that Demetrias was probably a Seleucid re-foundation of Strato's Tower. He presents two dated series of silver drachms (with the monogram 'HΔ' in ligature) struck during the first reign of Demetrius II Nicator which could have been minted at Demetrias starting from SE 171 (142/141 BCE). It seems possible that Demetrias was taken by forces loyal to Demetrius II and served as coastal base against the troops of Tryphon and these coins were struck to fund military operations. This puts the dating of the civic Zeus/cornucopia bronzes from Demetrias into the period between 138/7 and 63/62 BCE.

*Diospolis-Lod.* This M.A. thesis by FARHI (66) includes a corpus of the Roman Provincial coins from Lod (Diospolis) with 20 types from Septimius Severus to Elagabalus, and an additional catalogue of the Umayyad and Abbasid coins minted in the city. The author discusses the historical and numismatic background, the era of the mint, iconography and coin types.

Gadara. LICHTENBERGER (74) suggests that the galley appearing on coins from Gadara dating to the time of Marcus Aurelius to Gordian III, is a reference to a 'naumachia', a mock naval battle performed on the occasion of a municipal festival. The author deciphers a hitherto lost line of the inscription on this type which refers to the location of the naumachia, in the valley of the river Hieromykes (Yarmuk).

Gaza. Three previously unknown lead coins dated SE 235 (78/77 BCE) are attributed by HOOVER (70) to the mint of Gaza. The date of SE 235 is consistent with the iconography and the style of this period. Based on these issues the author revaluates the destruction of Gaza by the Hasmoneans, and states that Josephus' account of the city's destruction by Alexander Janneus in c. 95/94 BCE—together with Kushnir-Stein's proposal for a potential civic era starting 108/107 BCE—are controversial. The author believes that Josephus' description of the damage to the city may be overestimated, and Gaza continued to exist as a corporate entity even after the defeat to Jannaeus. Finally, the author discusses the historical and economic context of this lead series, stating that they were used as regular coinage. This is stressed by the appearance of

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countermarks on these lead coins. The purpose of the striking of these coins remains obscure. YASHIN's private collection (3) yields a comprehensive section of coins from Gaza.

Hippos-Susita. Within the framework of the excavation report at Hippos-Sussita, LICHTENBERGER (75) discusses two main topics: the name (toponym) and titles of the city as they appear on its earliest coins (*Antioch at Hippos*). The Greek toponym Hippos is the translation of the Semitic one. The second topic discussed in this article, is the iconography of Zeus Arotesius and Tyche, which were the most popular cults in the city. Finally he discusses the image of the horse that turns into Pegasus from the time of Marcus Aurelius. Both name and iconography show the results of the encounter of Hellenism and local religious traditions.

Marisa. GITLER AND KUSHNIR-STEIN (68) argue that the helmeted head appearing on the large denomination—which Qedar associated to the bust of Gabinius—must be that of Athena and they publish two new coin types dated to year 2. Following this discovery, it appears that the earliest possible date for the beginning of Marisa's era must be 59/58 BCE (under the Syrian governor Lentulus Marcellinus), or more likely, sometime during Gabinius' tenure as governor (57–54 BCE). BARKAY (57) summarizes the Hellenistic coin finds discovered during excavations at the site of Marisa, destroyed in 108/107 BCE. She applies archaeological data to propose dates for three hitherto undated groups of coins: coins from Side, Pamphylia; autonomous city-coins, mainly from Ascalon, and early Nabatean issues which she dates to an early stage in the reign of Aretas II, before 110 BCE.

*Neapolis.* A coin at the British Museum dated to Philip Senior, depicts a scene which in MESHORER's opinion (77) is the Passover ceremony as celebrated by the Samaritans until today.

*Nysa-Scythopolis*. A volume by BARKAY (58) presents a full corpus of the coins of this city from the early Roman period (50s BCE) to Gordian III (240/241). The book, based on the author's PhD dissertation, discusses the city's pantheon as results of the recent extensive excavation of the city. This work surveys the names and titles on the coins and their denominations.

*Petra*. GITLER (170) analyzes a group of clay bullae with legends and motifs appearing also on the coins of the city. Some of the pieces present the titles "colonia" and "Antoniana", which

suggest a date for this group to sometime between 209 and 212. One type is related to the cult of Dusares.

Philadelphia. LICHTENBERGER (76) Heracles is the predominant figure on Roman provincial coins from Philadelphia. The author publishes a well preserved coin of the large denomination issue of Marcus Aurelius depicting a unique Heracles type, where the figure holds a tree over his shoulder. The author believes the source for this depiction is an Olympian myth related to Heracles. The author makes a correlation between the characters of Heracles at Philadelphia with that of Melqart at Tyre, a god also regarded as symbol of the universal cycle of nature.

Raphia. Thirty-one coins from this city were recently published from YASHIN's collection (3).

Tyre. Two articles by BIJOVSKY (61, 60) make new attempts to decipher the enigmatic iconography of the coins from this city. In the first the author describes the different Tyrian types depicting the Ambrosial Rocks. She states that the coin representing the rocks as stele-shaped might be a representation of the sacred precinct of Melqart in Tyre, as known from literary sources of Tyre and the Tyrian colony of Gades. The second study focuses on an unpublished coin type depicting an oval shaped form encircled by a serpent which reads on its exergue the legend 'Aion'. The author interprets this coin type as evidence for Orphic cults at Tyre. GITLER AND BIJOVSKY (67) publish an additional coin of Gallienus with the Phoenician inscription 'Pygmalion' which helps to establish a chronological sequence for this type, as first discussed by Bijovsky in 2000.

### Jewish Coins.

Yehud coins continued to be produced under Ptolemaic rule. GITLER AND LORBER (99) establish a new classification and chronology of the Ptolemaic coins of Judea, based on a corpus of over 200 specimens, divided into eight groups. This study includes an analysis of types, legends and die axis and an appendix of hoards of Persian Yehud coins and Ptolemaic issues of Judea. In a second article GITLER AND LORBER (20) publish two obols of king Ptolemy I which were not known before. They explain that fractions smaller than a drachm are quite rare in Ptolemaic coinage, some of them are published here for the first time. The obols feature a bovine head in the reverse and the authors believe their origin is Palestine, where this denomination was already common. Another unknown variant depicting Ptolemy I and the eagle is published by GERSON (97), who dates the coin to 300–283/282 BCE. FRIED (96) tries to identify the name

which appears on the quarter obol published by Barag, depicting a facing head on the obverse and an owl on the reverse with the inscription YWHNN KWHN. The author suggests that Yohanan was a high priest sometime between 378–368 BCE and is mentioned in the Elephantine papyri. A comparison with Cilician and Samarian coins helps to shed light on the dating of the coin.

A considerable number of studies on Hasmonean coinage have been published, showing that there are still many issues of interest to be researched. First of all, KAUFMAN (113) publishes his second monograph of unrecorded Hasmonean coins, which includes 700 new variants. This volume presents a list of new variants according to Meshorer's Ancient Jewish Coinage 1 classification and an alphabetical classification of the inscriptions prepared by Shraga Qedar which proves very useful for identifying individual legends. The internal chronology of the Hasmonean coinage is still an issue in dispute, as shown by two principal studies. Based on coin finds from controlled archaeological excavations, SHACHAR (124) examines the presence (or absence) of the anchor/star type of Alexander Jannaeus, what he calls 'later coinage', as dating evidence for abandonment of the sites. The author also establishes a new sequence of Jannaeus's types and supports the idea that the anchor/star type was struck by one of his successors, possibly Salome Alexandra, his widow. In reaction to this theory, HENDIN (104) re-establishes that while YEHONATAN coins were struck by Janneus, YONTAN/YNTN coins belong to John Hyrcanus II. ARIEL AND HIRSCHFELD (85) present an assemblage of 1735 coins found at the Dead Sea, almost all the coins of the common anchor/star-within-diadem type of Alexander Jannaeus (Meshorer's *Treasures of Jewish Coinage—TJC*— group K). The latest coin is a single example of group L, dated to year 25 (80/79 BCE or later). Ariel proposes that the degenerated sub-types of group L were probably minted after Jannaeus' death, maybe by his widow Salome Alexandra. The study makes a clear typological analysis between TJC groups K and L of Jannaeus. Following this discovery ESHEL AND ZISSU (92) suggest an interpretation—based on Jewish tradition as described in Hazal literature—for the enormous amounts of Jannaeus' prutahs found in the area of En Feshkha on the Dead Sea shore. According to this tradition prutahs which could not be donated to the temple should be thrown to the Dead Sea. Another group of coins of Mattathias Antigonus discovered during excavations at 'Ein Feshkha was published by BIJOVSKY (87). This small deposit of eight bronzes of Mattathias Antigonus (of the large denomination with the exception of one coin of the middle denomination) was buried to ensure good luck. The increasing number of coins of this ruler found in this area show that they circulated widely from Jerusalem eastwards to the Dead Sea.

BERROL (88) defines the widespread use and tolerance of silver Tyrian shekels for payment of the annual temple tax, in the light of the prohibition of making graven images as an interesting paradox. HOOVER (109) believes that the anchor/lily type struck in Jerusalem by John Hyrcanus I in the name of Antiochus VII, must be reinterpreted as a sign of the Hasmonaean state's relative autonomy. The author suggests that the anchor that appears mainly on coins of Jannaeus, appears later on coins of Herod and Archelaus as a symbol of continuity and legitimacy. SYON (126) also dedicates a study to this coin type and argues that the relatively large number of coins struck by John Hyrcanus I in the name of Antiochus VII which have been found in northern Israel, provide evidence for a considerable Jewish population in Galilee already before the Hasmonean rule. MAIN (120) examines the nature of the flower depicted on two issues of John Hyrcanus I and one issue of Alexander Janneus and reaches to the conclusion that it is not a lily but a rose which resembles the flower on the Rhodian types. Hasmonean kings hired Rhodian mercenaries and this could be the historical significance for the use of this design. Finally, FONTANILLE (94) publishes two unrecorded Hasmonean coins. The first is a prutah of John Hyrcanus which depicts a star above the pomegranate on the obverse. This is a single specimen and according to the author the first appearance of the star as a symbol of heaven or monarchy on a Jewish coin. The star might refer to a real astronomic event, the appearance of a supernova, recorded in 134 BCE, or is the sign of an official. The second is a new type of lead tessera of Alexander Janneus, depicting the anchor within circle and the title BA $\Sigma$ I $\Lambda$ E $\Omega$  $\Sigma$  A $\Lambda$ E $\Xi$ AN $\Delta$ POY and on the reverse the double cornucopia and pomegranate.

A number of papers are related to the Herodian dynasty. KUSHNIR-STEIN (117) summarizes the state of research of Herodian coinage, especially issues associated to the dated coins of Herod the Great and their place of mint, the dating of the coins of Antipas, the coin of Philip with the jugate portraits of Tiberius and Livia, the eras and mints of Agrippa II. ARIEL'S PhD dissertation (84) deals with the coinage of Herod I based on the historical background of the period and Herod's biography. This study presents an analysis of the numismatic and archaeological evidence, the iconography, legends and the geographical distribution of the coins. The most important contribution of this study is the attempt to determine an absolute chronology of both dated and undated bronze coins of Herod and their mint. This last issue was previously discussed by the author (83). Fontanille and Ariel (95) perform a comprehensive die study of the large helmet/tripod Herod's type including 456 specimens. They discuss its iconography, absolute date and place of minting, which the authors proposed was Jerusalem in 38/37 BCE. A small group of 76 coins was isolated with reverse dies that have noteworthy characteristics (the appendage group). The authors believe that some engravers of this type may have also produced dies of the

shield/helmet types, while there is no clear evidence for this regarding the fruit/winged caduceus type. JACOBSON (110) deals as well with the largest denomination of Herod I, focusing on the iconography of the helmet. The author summarizes the different ideas suggested regarding its identification. One of the most accepted theories is that the object represents a Dioscuri cap, a symbol of victory. The author supports this version and stresses that in the light of Herod's pagan sympathies and cultural orientation the use of pagan symbols on coins of Herod the Great is very evident. The motif is an allegorical representation of King Herod.

In his book about the literary and archaeological sources of Herod Antipas, Herod's son tetrarch of Peraea and Galilee, JENSEN (111) dedicates a chapter to his coinage. The author examines the coins and takes into account both message and minting: the iconography and the circulation of the coins. The coins are examined in the wider historical context of the Second Temple period. HENDIN (105) publishes a unique new coin-type of Antipas which in his opinion was minted by Antipas in Sepphoris, his first capital, during his fourth year of reign (1 BCE–1CE). The coin depicts a palm branch with the legend  $'EP\omega'$  and a grain of barley on the reverse with the inscription 'tetrarch' and the Greek letter ' $\Delta$ ' (four).

KUSHNIR-STEIN (116) proposes a new chronology of the coins of Agrippa II. The problem is directly related to the origin of the mints. The author believes that some of the coins were minted in Caesarea Paneas, where the basic era was 49 CE and the secondary era was 54 CE (coins with double dates). The rest of the coins must have been struck according to an era dated to 60 CE, when Agrippa's kingdom was enlarged by Nero. The mint of this group is still unknown. In response to C. Jones and A. Kushnir-Stein's reviews on his book about the Herodian dynasty, KOKKINOS (115) deals with two main issues: the date of death of Agrippa II and his eras. Kokkinos argues that while Justus proposed an absolute date for the king's death (100 CE), Josephus (*Antiquities* and *Life*) did not, however Kokkinos sees no conflict between both testimonies. Kokkinos refutes Kushnir-Stein for the three eras she proposes, agreeing only regarding the era of Neronias in 60/61 CE.

STRICKERT (125) discusses the portrait of Livia 'Julia Sebaste' on a rare coin of Philip minted in Caesarea Philippi in 30/31 CE. This is the first woman to be portrayed on a Jewish coin. The coin was dedicated to Livia a year after her death. The article focuses on Livia's iconography.

At the editor's note of the second volume of *Israel Numismatic Research*, KUSHNIR-STEIN (118) raises the problem of the dating of coins attributed to the Roman governors of Judea. These coins were minted from 6 to 66 CE with a short interlude between 41 and 44 CE. The coins show the name of the emperor and his regnal year but the names of the governors do not appear on the

coins. The current classification system is based on interpretations of the dates of the governors rather than fact, and has a potential to mislead. The author suggests classifying these coins by a simple and precise system utilising the information that appears on the coins only. HOFFEDITZ (108) presents an iconographical and historical discussion behind the use of the lituus and simpulum as coin-types of Pontius Pilatus (26–36 CE). The author believes these motifs were chosen in a period of increasing number of *Maiestas* (treason law) trials, as result from Pilatus' fear of appearing disloyal to Tiberius, and he displayed his devotion through the worship of Augustus. The author suggests that both motifs appear here representing the image of the emperor Augustus.

KUSHNIR-STEIN (50) analyzes the use of bevelled edge technique coins to establish a relative chronology and place of manufacture of coins. Most of Jewish coins are bevelled and the author attributes their minting to the mint of Jerusalem.

Coinage of the two Jewish revolts has always drawn special interest of scholars all over the world, and still constitutes the most popular issues for discussion in Jewish coinage. GOODMAN (102) analyzes the common features of the coinage of both revolts. He argues that the chosen materials (pure silver and bronze), the language, the symbols, the dates on the coins (record for a new era) and the slogans selected by the rebels, were intended to make these coinages distinctive issues. The minting authority responsible for the new coins was trying to establish a new political identity that portrayed itself completely different from surrounding Greek or Hellenized people. A different opinion is proposed by CIECIELAG (89), who analyzes primarily the iconography of the coins struck by Roman emperors during both Jewish revolts, from the Flavians to Hadrian, in light of the historical events. He checks whether coin types bearing propaganda messages denote anti-Jewish policy but eventually does not find tangible proof for that. While the Flavians objective was the legitimization of their imperial power, Hadrian's policy was to show the benefits that Judea would enjoy after suppressing the Bar Kokhba revolt, with the emperor in the role of benefactor of the provinces. KINDLER (114) discusses two motifs which appear on coins from the Jewish War and Bar Kokhba revolt, the 'lulav' and the 'ethrog', both symbols of the Feast of the Tabernacles. The author deals with their iconography in ancient Jewish art, especially on Jewish seals from Iran, where they were used as symbols of identification with the Jewish community, such as the menorah and the Star of David did in other places of the Diaspora.

GOLDSTEIN AND FONTANILLE (100) performed the first in-depth die study comprising a significant percentage of silver coins of the First revolt. The study involves minting authorities, die characteristics, epigraphy, motifs, denominations and weights, causes of the war and

repercussions. The authors conclude that two mints operated with different goals, the motifs and propaganda legends of each mint have their own distinctive ideological connotation. Silver coins for Temple use were manufactured with special care while low quality prutahs were mass produced for daily use. Mc. LAREN (121) analyzes in detail the coinage of the first year of the war. By asking a number of key questions, the author stresses unique and distinctive features and innovations of this coinage. He argues that the decision to produce only silver coins during the first year was deliberate, beyond any economic interest but related to asserting independence or making a statement about political status. The Jewish sheqel took the place of the Tyrian sheqel in order to pay the annual temple tax. Then this coinage was meant to be an expression of independence with Jerusalem and the temple acting as focal points, offering the only viable source of silver and likely place of minting. The author believes that elements of the priesthood, connected with the running of the temple were responsible for the minting and that the coinage is very relevant to understand Josephus' account on the beginning of the war. RAPPAPORT (123) presents a different view about the same issue. He states that there is an incongruity between the unstable government and changes of leadership in Jerusalem on the one hand, and the stable and systematic issue of coins by the minting authority on the other. Based on an historical analysis and the interpretation of the legends on the coins, the author concludes that the silver and bronze coinages of the war were minted by different parties. The author suggests that the silver coins of the Jewish war were minted in the Temple by the Jewish authority (Zealots?) and was intended to meet the needs of the Temple's functioning and maintenance and not to supplant Tyrian sheqels for the payment of taxes. Bronze coins, were minted independently of the Temple mint for two aims: to propagate its ideology and to supply small change.

Two articles deal with the relation of the Tyrian sheqels to the Temple of Jerusalem. Based principally on hoard evidence, Levy (119) reasserts her thesis that the minting of "official" autonomous sheqels of Tyre was not transferred to Jerusalem in the time of Herod the Great but continued at Tyre itself through 65/66 CE. Crude pieces are irregular issues which belong in the 20s CE, and were probably minted outside Tyre's official mint. She also discusses the control marks on the coins and suggests they can be personal names of annual magistrates. WEISER AND COTTON's (128) joint article deals with two central issues: through the examination of die links in a hoard of Tyrian sheqels, WEISER shows that there was no break in style at the crucial moment —18 BCE—as suggested by Meshorer. COTTON claims that Tyrian money, although non-existent as a coin at the time was a unit of evaluation.

Two studies deal with the Roman issues struck to celebrate the victory over the Jews. ZARROW (129) analyzes the local types minted in Judea and their implications on the debate on

image and authority. The mourning woman of Judea Capta series has no imperial numismatic prototype, and the minting of coins within a defeated province to commemorate that province subjugation is an innovation. This imagery is in dialogue with the autonomous coinage of the Jewish War: one proclaimed political independence, the other the realities of the defeat. Domitian's coinage in Judea introduced Latin inscriptions, a further expression of imperial control. The triumph over the Jews gave Vespasian legitimacy to found a new imperial dynasty and a new visual rhetoric is implemented both in Rome and Judea. HENDIN (107) analyzes Domitian's provincial coinage of Judea minted at Caesarea Maritima, in the context of the Roman victory in the Jewish War. These coins resemble Roman coins in their design, bear the emperor's portrait and Latin legends. The author also discusses the coins of Agrippa II and the coins of Domitian at Pella both bearing types commemorating the victory over the Jews. Hendin believes the message was to remind the local population about this victory, with Domitian as the current representative of the Flavian dynasty.

The legends on coins minted in Gamla during the Jewish war are the subject of debate. Just about the same time, two scholars suggested new and closely similar readings of the obverse legend. While according to FARHI (93) the inscription reads 'begamla' (מְלֵּמִלֹּמִלֹּת), namely 'in Gamala'—instead of the former 'legeulat' (מְלֵּמִלֹּת), 'for the redemption'— Pfann (122) proposes the reading 'megamla', meaning "from Gamla", which is analogous to the ethnic genitive appearing on contemporaneous city-coins with Greek legends. Both authors agree that this coin was the first Jewish city coin. In addition, FARHI reexamines the dies of the nine known specimens of this rare type and concludes that at least two obverse dies and three reverses were used. Syon (127) in response, reasserts his belief that only one obverse and two reverse dies are known for Gamla coins. He also suggests the coins are locally cast flans with filing marks showing a finishing process before striking. ARBEL (82) analyzes the circumstances and date of minting of the Gamla coin and reaches the conclusion that a better political, spiritual and even economical impact was achieved if the coins were minted during the seven months of the apparent blockade of Gamla by Agrippa II, sometime between February and August 67 CE. This opinion is also accepted by Syon.

KAUFMAN (112) publishes an addendum to Mildenberg's corpus of Bar Kokhba coins presented according to the same classification system based on dies. GOODMAN (101) analyzes the historical background of the revolt and states that the hostility of Hadrian towards the Jews was the final stage of an anti-Jewish policy of Rome initiated by Vespasian soon after the capture of Jerusalem in 70 CE. Based on the stylistic analysis of Bar Kokhba coins, BARAG (86) discerns between a central or 'regular' mint and a subsidiary or 'irregular' mint of Bar Kokhba

coins. He suggests that the central mint operated most likely in Herodium, while the subsidiary mint did it somewhere to the north or northwest of Jerusalem. ESHEL (91) makes a correlation between the denominations and weight of the Bar Kokhba coins and their designs. The author believes that Bar Kokhba bronze coins were struck in four different denominations, which reflect the change of weight in coins depicting the lyre after the first year of the revolt. This change led to a change of design from 'nebel' to 'kinor' during the third year of the revolt.

The geographical distribution of Bar Kokhba coins is a dynamic issue which is constantly updated in accordance to new archaeological discoveries. ZISSU AND ESHEL (130) published an English translation of their study already mentioned by Gitler in the previous Survey of Numismatic Research. In her report about the coins from Khirbet Bad-'Isa—Qiryat Sefer, BIJOVSKY (156) discusses new discoveries of Bar Kokhba coins in the area of Benjamin, which expand northwards the territory occupied by the rebels. Most recently another numismatic update of the northwestern border was presented by AMIT AND BIJOVSKY (81) with the discovery of three "year 2" Bar Kokhba coins at Khirbet el-Burnat and a coin of the first year from Khirbet Zikhrin. The authors also raise the question about the correlation between the geographical location of the sites and the dates of Bar Kokhba coins associated with them, and the progress of the Roman army as it moved to suppress the revolt.

Some interesting Bar Kokhba coin finds have been published. GERSON (98) discusses an overstrike of the second year of the revolt on a Judea Capta denar. The author wonders whether the Bar Kokhba rebels were aware of the added ideological significance of overstriking such particular coins with dies of the rebels. HENDIN (106) publishes a rectangular piece of cut bronze struck with a pair of dies for undated Bar Kokhba denars. This is the first known test strike for Bar Kokhba coins. He attests that test strikes were usually done in lead and are usually uniface. The same author (HENDIN 103) publishes an assemblage of 16 coins: four Roman gold aureii, five denars and seven Bar Kokhba bronzes which came in the author's possession along with fragments of an oil lamp. The uniform patina on the coins and the interior of the lamp suggest that this was a collection. Exceptional in the group is a denar of Antoninus Pius, meaning that the invalidated Bar Kokhba coins were kept for more than 15 years.

GERSON (47) published a countermark reading 'LVS' for Legio V Scythica, which appears on a coin of Otho naming the governor Mucianos from Antioch and dated to 68/69 CE. This countermark usually appears on coins in the context of the Jewish War and on the undertypes of Bar Kokhba coins. Based on this find the author proposes a later date for the presence of this legion in Israel, during the Bar Kokhba revolt.

DESTROOPER (90) analyzes the large number of Jewish coins discovered in Cyprus (191 coins) as the result of two factors: the great output of coins minted in Jerusalem from the end of the second century BCE until c. 70 CE and the presence of Jews on the island. Most of the coins come from archaeological excavations, but also from public and private collections. The most common attested coins in Cyprus are year six Agrippa I bronzes from Jerusalem. The author also relates to Cypriot coins found in the southern Levant, most of these coins are much earlier (Persian and Hellenistic periods).

#### Nabatean Coins.

ZOUHDI (136) presents an historical overview of the Nabatean monarchy based on Greek and Latin literary sources, followed by a general discussion of the technical and iconographical features of the collection of 130 Nabatean silver and bronze coins in the National Museum of Damascus. BARKAY (131) presents seven new silver Nabatean coins, among them a new variant of a quarter sheqel of year 26 of Malichus I, published together with the two only known half sheqels of year 28. The most interesting coin of Obodas III published here is a quarter sheqel depicting a camel, a new motif not known from any other Nabatean coin. Based on the numismatic evidence from excavations in Marisa (see also 57), she further suggests the reign of Aretas II started much earlier than 110 BCE. YOUSEF (135) examines the relationship between Nabatean coinage and Nabatean inscriptions, especially as depicted in the tombs of Hegra. Inscriptions found there indicate that Sela', the Nabatean capital (Petra), lies in Hegra or around and coins have been minted there since the days of Aretas IV until 106 CE. 1. SCHWENTZEL (134) presents an iconographic analysis of the image of the king on Nabatean coins and concludes it is a local adaptation of the Hellenistic model. HOOVER (133) studies the lead coinage of the Nabateans in light of new discoveries. He classifies this rare coinage (61 specimens) into twelve typological groups and analyzes the chronology, iconography, inscriptions and function of the lead coins. The author attributes this series to Obodas III and Aretas IV and suggests that they functioned as tesserae, distributed by the authorities on special occasions. Based on coin finds from excavations at Petra, BOWSHER (132) analyzes the monetary interchange in Nabatean Petra and states that very few Nabatean coins of the first century BCE have been recovered archaeologically while silver coins are often found in funerary contexts. By the end of the first century CE, Nabatean silver dropped in weight and silver content in comparison to the Roman denar. From the first century CE Nabatean coins are by far the largest number (70%), mainly issues by Aretas IV and later Rabbel II. Aretas IV's lower denominations,

were not produced by his successors and continued to circulate throughout the century to serve an economic function.

### Iturean Coins.

In three different studies HERMAN (137, 138, 139) presents the Iturean coinage from different aspects. He publishes an iconographical study of the coins of Ptolemy son of Mannaios, discusses the Heliopolitan triad of Jupiter, Venus and Mercury and its Iturean version as seen on the local coins: Zeus, Artemis and Hermes. He studies the collection of Iturean coins in the numismatic collection of the Institute of Archaeology at the Hebrew University of Jerusalem. Finally he publishes a comprehensive and most updated corpus of Iturean coinage based on finds from excavations and coins from public and private collections. The corpus includes useful indexes of years, monograms and countermarks.

## Numismatic Evidence from Excavations (Sites by A-B).

'Ain-'Arrub. TSAFRIR AND ZISSU (195) publish a hiding complex of the Second Temple period and the time of the Bar-Kohkba revolt in the Hebron hills. The report includes a catalogue of twenty-three coins discovered during the excavations in 1968 and 1973. These are all Jewish coins including issues of Alexander Janneus, Agrippa I, the procurators, a large number of prutahs of the first and second year of the Jewish War and finally three coins dated to the second year of the Bar Kokhba Revolt (133/134 CE).

Ashqelon. Gitler and Kahanov (168) publish a hoard of 46 bronze coins and one diobol found in 1988 at excavations in Ashqelon. The coins dated to between 412–404 and c. 100 BC Their places of origin are all located along a known, geographical seafaring route, and in all of them remnants of ancient harbours can be traced: Teos, Samos, Kos, Knidos, Rhodes, Lycia (Xanthus Valley, with Patara as its sea port), Side, Paphos, Antioch (Seleucia) and Tyre. The authors suggest that this hoard may have been gathered by a sailor during the voyage (or voyages) of a merchantman. If this is indeed the case, it would seem that all these issues were in circulation at the time in the places concerned. This would imply that in c. 100 BC these coins were still in circulation. This temporal dispersion seems rather unusual and, of course, further evidence is needed to confirm such simultaneous circulation or to suggest an alternative explanation for the composition of the hoard. SOKOLOV AND BIJOVSKY (189) wrote the report for the coins discovered at Horbat Hazaz, Ashqelon. Ninety-four coins were found dating from the Seleucid to the Early Islamic period. Noteworthy are two coins of Hadrian from Ascalon and

Faustina from Gaza which provide evidence for the local coins in circulation. The Byzantine coins from the site constitute a varied assemblage.

*Bad-'Isa, Khirbet.* The numismatic report written by BIJOVSKY (156) suggests this Jewish village was first settled during the Hasmonean period and was abandoned after the Bar Kokhba revolt. A total of 351 coins were discovered, including a silver hoard of 146 Roman Imperial and Provincial coins and two aureii and another hoard containing a single tetradrachm of Vespasian and 44 bronze coins, the latest dated to Hadrian. The report includes a comprehensive discussion on the distribution of Bar-Kokhba coins based on new discoveries in the area of Benjamin.

Beirut. Butcher (163) publishes over 7000 coin finds from the Beirut Souks and Bath House sites (BEY 006 and BEY 045) dated from the fourth century BCE up to the coinage of Heraclius in the Byzantine period. Most of the excavated material consists of low denomination base metals, only less than a half were identifiable to a certain degree. The catalogue includes 3196 isolate and eleven hoards chronologically arranged; illegible coins are not included. The bulk of the material is Late Roman, particularly struck between 347 and 408 CE. This is the first published numismatic report from a large site in Lebanon, which in addition raises methodological questions and offers alternative approaches to the meaning of coin finds and small change. In another study, BUTCHER (162) discusses in detail a number of factors which govern the deposition of coins in a site: the products of 'casual loss'; coins which are actually not found in a certain site, the redundancy factor (meaning that coins were lost because they were useless or residual and they ceased to be official); coins found in a site which were actually not part of the currency at the site. The author applies these factors to examine the patterns discerned on the evidence from Beyrut 006 and 0045, checking peaks and troughs in coinage over time.

Beth She'an. In their volume about the Caesareum and the Odeum, MAZOR AND NAJJAR (179) include a short introduction to the coins found in both buildings: 360 coins of which only 114 were identifiable, and a hoard of 128 coins. Both buildings were dismantled down to their foundation levels, so most of the coins come from post-complex accumulations and fills. Some coins date from the second to the fourth centuries, but most are dated from the late fourth to the seventh centuries. An appendix with a list of coins and preliminary short identifications was prepared by A. Berman.

Caesarea. A book by DE ROSE EVANS (165) presents a catalogue of the 2734 identifiable coins (out of 8000) found in excavations of the Joint Expedition to Caesarea Maritima (JECM). The catalogue is preceded by a commentary on the coin finds century by century, a comparison of the finds at Caesarea with other sites in Israel and the region. The author makes an attempt to establish economic relations through statistical analysis using Annual Average Coin Loss and Pearson's Chi-Square Test.

Capernaum. A book by CALLEGHER (164) brings a summary of all the numismatic finds excavated at Capernaum (1968–2003) with an analysis of the 1221 isolated coins discovered at the village. Callegher gathered the isolated coins from all the expeditions that took place at the site, classifies them into four chronological phases and discusses the coin circulation in comparison to other sites in the area. No catalogue however, nor details on the hoards is included.

'Ein ez-Zeituna. Twenty-five coins, most of them Roman provincial issues dating to the first and second centuries CE, have been published by BIJOVSKY (158). The site is alongside a main road leading from Caesarea to Bet She'an and the coins come from the mints in the area: Caesarea, Sepphoris and Tiberias, reflecting the common currency that circulated in the vicinity.

'En Feshka. A group of coins of Mattathias Antigonus discovered at 'En Feshkha was published by BIJOVSKY (87). This small deposit of eight coins wrapped in a cloth bag was discovered under the corner of a threshold of one of the rooms in the main building excavated by Y. Hirschfeld at 'En Feshkha. All the coins are bronzes of Mattathias Antigonus of the large denomination with the exception of one coin of the middle denomination. The hoard was deposited as an omen to ensure good luck.

'En Gedi. Several publications have been published during the last six years dealing with coin finds from this site. ARIEL (143) compiles a catalogue of seventy-one coins from the village, pointing to the three main occupational periods at the site: Roman, Byzantine and Mamluk. ARIEL (147) also published the coin finds from the excavations conducted by B. Mazar and I. Dunayevsky from 1961 to 1965. The catalogue includes 30 bronze coins from the third to fifth seasons of excavations. The author makes a summary of all the other coins from the excavation published before elsewhere, including the hoard of 139 prutahs of the first century CE discovered within a clay lamp and published by MESHORER (183). This hoard was first published

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in 1976 with an emphasis on the significance of this find (against evil eye) and in its final report MESHORER establishes that the total amount was the equivalent to half a shekel in small change. This final report adds some stratigraphic details on the hoard and a full catalogue of the coins. The numismatic evidence is typical to the site of 'En Gedi, including coins dating to the Ptolemaic period, many Jewish coins (Hasmonean, Herodian, Jewish War), Nabatean and Roman Provincial (Trajan from Ascalon, Hadrian from Dora). BIJOVSKY (160) prepared the coin report of the 1247 coins discovered during the seven seasons of excavation (1996-2002) directed by Y. Hirschfeld. The catalogue includes 603 coins that were identifiable and is arranged according to areas of excavation including four small hoards or deposits, three dated to the Byzantine period (including two small gold hoards) and the Mamluk period. PORAT, ESHEL AND FRUMKIN (185) surveyed a cave to the north of 'En Gedi, finding two groups of Bar Kokhba coins. Eleven bronzes were discovered in the Har Yshay cave, together with two papyrus documents, arrow-heads, pottery and other vessel fragments. The coins belong to the second year of the revolt and the undated series, one of the coins was struck on a coin with a countermark of the Legio Sexta Ferrata. A hoard of nine silver coins was discovered within the Zabar cave. Among the coins are a tetradrachm and two denars of Bar Kokhba, all undated. The rest are Roman denars dating from Vespasian to Hadrian, including one drachma of Trajan from Bostra.

*Er-Rujum, Khirbet*. Two single surface coins were discovered and published by BIJOVSKY (154). The coins are related to stratum I, dated to the Persian-early Hellenistic period. Most remarkable is a well-preserved Athenian tetradrachm, dated to 449–412 BCE.

*Esh-Shuhara*, *Khirbet*. 2. Twenty-six Seleucid and Hasmonean coins from the excavation and a hoard of 22 Seleucid silver coins are presented and discussed by SYON (190). The numismatic evidence is used in conjunction with the stratigraphy to reconstruct the history of the site in the Hellenistic period.

Faynan, Jordan. Excavations were taken in 1963 and from 1984 to 1997, yielding 1395 coins of which 1013 have been indentified. The coins have been published by KIND, GILLES, HAUPTMANN AND WEISGERBER (172). 103 coins have been minted from about 300 BCE to 312 CE, including 7 Ptolemaic, 6 Jewish, 40 Nabatean, 17 Roman Provincial and 9 Roman Imperial. The site was an administrative center for copper production, located 50km south of the Dead Sea.

Gamla. SYON'S PhD dissertation (56) dealing about the monetary influence of Southern Phoenicia on Galilee and the Golan in the Hellenistic and Roman Periods, discusses in detail the numismatic evidence from Gamla, a Jewish settlement in the Golan, destroyed by the Romans in 67 CE. This study relates to the 5800 identifiable coins from 18 seasons of excavation, 3900 of them are Hasmonean and includes three sections: 1. the numismatic material, presented chronologically and typologically, including the local coins minted at Gamla during the Revolt; 2. the coins in the context of the excavation and 3. the monetary influence of southern Phoenicia on Galilee. In addition, a total of 142 coins were uncovered by SYON (193) during renewed excavations (1997–2000) at the site. Among the finds are a coin of Amphipolis in Macedonia (apparently unique find in Israel), a civic coin of Seleucia on the Tigris, a coin of Gabinius from Nysa-Scythopolis and a seventh specimen of a 'Gamla' coin.

*Hurfeish.* Syon (192) publishes the coin finds from burial caves D and E. A group of 28 very well preserved coins, mainly provincial issues of Tyre and 'Akko-Ptolemais, including unpublished and rare types are discussed in depth.

*Jericho (Abu el-'Alaiq, Tulul)*. The coin report was prepared by MESHORER with the assistance of N. Ahipaz (182). The coins represent two main periods: Hasmonean and Herodian. Twenty coins of Mattathias Antigonus comprise a hoard found in Locus A(B)22. The number of coins of Alexander Janneus is abundant and there is a variety of coin types of Herod I.

Jerusalem, Binyanei ha'Uma. A settlement of the late First to Second Temple period, Tenth legion's kilnworks and a Byzantine monastic complex were discovered at the site. BIJOVSKY (157) analyzes the 151 coins found during the excavations and the additional 23 coins from Avi-Yonah's excavations at the site in 1949 and 1968. Most of the coin evidence is dated to the first century CE until 70 CE and the immediate years after the Jewish War. Only one coin of Aelia Capitolina (Antoninus Pius) was discovered and one coin with a 'LXF' countermark.

Jerusalem, Jewish Quarter. GITLER (169) compiles a catalogue of 574 coins from areas A, W and X2 (only those up to the end of the Jewish war). He discusses the diversity of coinage and its correlation with the total of coin finds from eight different sites in Jerusalem and Masada, and a comparison to the total of coins from the Jewish Quarter, preliminary identified by Ariel in 1982. ARIEL (145) publishes the coin finds from area E. The catalogue includes 934 coins and a flan

mould, the first one of its type to derive from a well-dated archaeological context. The overwhelming majority of coins belong to Alexander Janneus followed by coins of Herod the Great. The finds in area E have contributed to the creation of a relative chronology for the undated coin issues of Herod and to date with accuracy stratum 3 of occupation at the site.

*Jerusalem, Shu'afat.* A preliminary report of the so far 326 identified coins discovered during the excavation, including four hoards of bronze coins was prepared by BIJOVSKY (159). Most remarkable are the finding of an aureus of Trajan and a hoard of 110 coins, most of them Judea Capta issues bearing countermarks of the Legio X Fretensis. The numismatic evidence allows an insight into the currency used during the period between the two Jewish revolts (70–132 CE). No Bar Kokhba coins were recovered.

*Jerusalem, Temple Mount.* A catalogue of 33 coins found in area XV at Mazar's excavations was compiled by MESHORER (180). The coins, arranged by stratigraphical units, are dated from the Seleucid to the Byzantine period.

Judean Desert. ARIEL (140) discusses the coins discovered during surveys and excavations of Caves in the Northern Judean Desert. The author presents a summary of the 223 coins discovered in 43 sites, almost all caves. Full identifications of the coins are incorporated into the other chapters of this volume. The author concludes that no pattern of currency can be established from the finds. The discussion concentrates on the numismatic evidence according to 'periods of upheaval' (refuge caves, monastic use, etc.). Two subjects are discussed deeply: the incidence of YEHUD coins and the plague during the reign of Justinian I.

*Kabri*. SYON (194) publishes twelve coins, most of them minted in Tyre and 'Akko-Ptolemais, which were found in a Roman period tomb and offer insights into burial customs in Phoenicia.

*Marmita, Khirbat.* SOKOLOV (188) the coins discovered in this agricultural Jewish settlement, probably abandoned after the Jewish war. Four of the five coins discovered during the excavations are related to installations dated to the Second Temple period.

*Manasseh Hill survey*. YANAI (197) compiles a catalogue of the coins discovered during the survey. The coins are arranged by site, most of them are dated from the Late Roman to the Arab periods.

*Mazin, Khirbet (Qasr el-Yehud)*. ARIEL AND HIRSCHFELD (85) present an assemblage of 1735 coins found at the Dead Sea, almost all the coins of the common anchor/star within diadem type of Alexander Jannaeus (Meshorer's *TJC* group K). The latest coin is a single example of group L, dated to year 25 (80/79 BCE or later).

*Megiddo*. TEPPER AND DI SEGNI (196) published a preliminary study on the finds of a Christian prayer hall at Kefar 'Othnay (Legio). The coins discovered in area Q (more than 100) were identified by G. Bijovsky. The reading of the coins allows dating the construction of the prayer hall to the first half of the third century CE (Elagabalus, Severus Alexander) and its last phase of use to the days of Diocletian.

*Naḥal Mikhmash (Wadi Suweinit), el-Jai Cave.* ESHEL AND ZISSU (166) discuss the sixteen coins found at the el-Jai cave dating to the end of the Bar Kokhba revolt, eleven are bronze and five are imperial denarii. Among the finds are four Bar Kokhba coins and four coins of Hadrian, two of them minted in Aelia Capitolina. The latest coin was minted by Hadrian in 133/134 CE in Gaza.

*Naḥal Beth Ḥanan*. KINDLER AND GUR (174) publish the coin finds from an early Roman farmstead. The catalogue includes 23 bronze coins, most of them are Hasmonean, a coin of Elagabalus from Aelia Capitolina and Late Roman coins. The latest coin is Umayyad.

*Namra, Khirbet.* ARIEL (144) discusses the eleven coins found at the site. With the exception of a Seleucid coin, the coins appear to indicate occupation at the site for a very restricted period, from the beginning of the third to the beginning of the fourth centuries CE.

Petra. GITLER (170) discusses a group of 120 clay bullae bearing titles of the city. The group was discovered in room 15 of the Nabatean mansion in area EZ IV, excavation at Az-Zanṭūr in Petra directed by Basel University in 1998. The bullae came from the upper floor destroyed by the earthquake in 363 CE. SIDEBOTHAM (187) presents a preliminary coin report of the Hellenistic Petra Project of excavations in the Civic Center. Eighteen bronze coins were

discovered during the 2004 season, most of them Nabatean. Among the coins is a Phoenician coin of Ptolemy II with the trident/anchor countermark and two autonomous coins from Arados, all three dated to the third century BCE. It seems that coins from Arados appear in Nabatean sites along the caravan route between Petra and Avdat, indicating the flourishing of this trade route, commercial exchanges between the Ptolemies and the Phoenician island after the end of the conflict in 241 BCE. Bowsher (132) discusses the monetary interchange in Nabatean Petra. This paper focuses on coin finds in excavations in Petra from the first century BCE and CE. None of the Damascene issues of Aretas III have been found in Petra and their circulation was limited to Syria. Very few Nabatean coins of the first century BCE have been recovered archaeologically. From the first century CE there is a wealth of data and Nabatean coins are by far the largest number (70%), mainly those of Aretas IV and Rabbel II. Roman Imperial coins are rarely found at Petra for they were of little use in a Nabatean context. Roman Provincial coins are however more commonly found (Antioch) but these do not truly reflect economic ties.

Qalandyia. ARIEL (142) discusses the 464 coins discovered at the site. This study deals with an analysis of the coin currency at the site, a discussion of specific coin types and the phenomenon of deposits of minute bronze coins of Alexander Janneus buried for apparently magical meaning.

*Qana, Khirbet.* SYON (191) presents an analysis of the 120 coins found in the excavations, ranging from the 4<sup>th</sup> c. BCE to the Mamluk period. Their distribution pattern in comparison with other Galilean sites is discussed and some historical insights offered.

Qumran. This is probably the most popular site of the region covered by this survey in terms of number of publications. ESHEL (167) presents the finds from excavations carried in three different areas in Qumran (a square north of the site, north-west of Cave 4Q and east of Cave 9Q). Six coins were discovered and a full numismatic report is presented and discussed in light of previous numismatic reports from Qumran. Among the finds is a Tyrian half-sheqel which according to the authors was deliberately defaced during or close to the Jewish War. HUMBERT, CHAMBON AND PFANN (171) publish a very useful new English edition of Spijkerman's identification cards from de Vaux's field diary. MESHORER (181) presents a summary of the numismatic evidence from Qumran. The most important find is the hoard of 561 Tyrian sheqels buried in three jugs in L120, the latest dated to 9/8 BCE. This find, together with the 15 coins of Herod found in the excavation point to the fact that there is no gap of occupation between the

date of the earthquake in 31 BCE and year 8 BCE, when the site was apparently abandoned. Based on a number of dated city coins, Meshorer also establishes a new dating for the destruction of the last phase of occupation at Qumran in 73 CE, like Masada and not 68 as established by the excavators. The couple LÖNNQVIST dedicated a number of studies to the site of Qumran and its coinage (175, 176, 177). In their first analysis of the Qumran coins they do not refer to Spijkerman's identifications. Later, in a full reconsideration of the coin finds from Qumran (176), the authors believe de Vaux's chronology is broadly accurate. A summary of the coins reconstructed from the lists in de Vaux's field diary yields 1250 coins (569 silver and 681 bronze). This study presents a number of non-consensual identifications, as the reattribution of the canopy/ears of grain prutah of Agrippa I to Agrippa II. They also deal with spatial analysis: the coin finds are plotted on a chronological scale against their reported place of origin (loci) within the plan of the site, so based on the density of coin finds, it is possible to trace activities and get an approximate idea of the internal use of the site. This exercise allowed the authors to prove that the Seleucid coins from the site were found in stratigraphical levels associated to period Ia. Histograms and calculations about average annual coin losses are presented, the number of coins in the site is relatively high and suggests reconsidering the assumption that an ascetic community resided there. The authors also discuss the hoard of Tyrian sheqels and wonder whether this is a currency hoard or just donations or contributions to the Qumran community. The authors support Kanael's conclusion about the low quantities of coins of Herod that suggest a gap of occupation between period 1b and II. They suggest a date of destruction of the site between 68 and 73 CE. Most recently LÖNNQVIST (177) published a detailed report of the Qumran hoard material in Amman, with a careful analysis of the coins including die comparisons. Based on de Vaux and other scholars, the latest Tyrian coins in the hoards were dated to 9/8 BCE and constitute the stratigraphical and chronological breaking point between periods Ib and Ia at Qumran. The author claims that the composition and chronological range of the coins is quite different from what was previously reported. Based on his new study of the composition, metrology and die study of the coins from hoards B and C, kept at the Department of Antiquities in Amman, Jordan, and published here for the first time, the author claims that the earliest possible closing date of the hoards seems to be c. 52/53–70 CE, shortly before of during the Jewish war. However, if the late Roman Severan denarii are not intrusions, the hoards were buried c. 210 CE and should be connected with the Severan military campaigns. An online version of the preliminary report of excavations in Qumran by MAGEN AND PELEG (1993–2004) (178) presents a short summary of the 180 coins found at the site and identified by D.T. Ariel. The bulk are Jewish coins dated to the first century BCE and first century CE, including 18

prutahs of the Jewish War and some Roman coins dated until 73 CE. MURPHY (184) relies on the numismatic evidence to discuss the circulation and loss of coins and wealth at Qumran in antiquity. Unfortunately her conclusions are based on irrelevant and not updated material. She connects the hoards of Tyrian sheqels to the payment of the Temple tax and considers the total number of coins as 'modest' concluding that the residents of Qumran lived simply and that the coin hoards attest that the site was a communal center.

*Hippos-Sussita*. A series of yearly coin reports from excavations at the site has been published by BERMAN (148, 149, 150, 151, 152,153). The catalogues include coins discovered at each season together with a general conspectus of the coins by chronological order. The catalogue of the third season also includes material from former excavations at the site and stray finds. The numismatic material includes coins dated from the Ptolemaic to the Ayyubid periods.

*Tel Goded.* SAGIV AND ZISSU (186) publish a Bar Kokhba stray coin, found on the top of Tel Goded and dated to the second year of the revolt which presents an unrecorded reverse die.

Tel Michal. ARIEL (146) discusses the 38 coins found during the excavations, most of them dated to the Persian and Hellenistic periods. Noteworthy among the isolated coins are Sidonian minute silver coins, posthumous bronzes of Alexander the Great and a coin from Side. In addition, a hoard was discovered which included fifteen silver coins: eleven Athenian-style tetradrachms, three minute silver Sidonian coins and a posthumous bronze from Tarsus of Alexander the Great. The study presents a discussion on the nature of the coins (authentic or imitations), prototypes for the imitations, dating and circulation together with a comprehensive survey of Athenian coin finds in the region. The author also refers to the numismatic evidence from previous excavations in the site. Numismatic finds clearly support historical evidence that Tel Mikhal was part of a Sidonian enclave on the central Palestinian coast.

*Tiberias. Mount Berenice.* The numismatic report by BIJOVSKY (155) describes the seventy-six coins discovered at the excavation. According to the coin evidence no settlement was established on the site previous to the Byzantine period. The earlier Seleucid, Nabatean and two coins of Hadrian are surface finds.

Zeita, Khirbet. KINDLER (173) publishes a hoard of quadrantes (Prutahs) from the Jewish War that was discovered at the site. The hoard includes 755 prutahs dated to years two and three of

the revolt. The author presents a typological discussion of the types: epigraphy, the shape of the amphora, classical and barbaric style prutahs. The author argues that the total number of coins was equivalent to somewhat less than two sheqels.

Zemel, Khirbet. ARIEL (141) discusses the only nine coins that were identifiable from a total of twenty-seven coins, almost all of them dated to the Seleucid period. The coins present a minimal chronological range of mere fifteen years. Most interesting is the discovery of two tetradrachms dated to 146/145 BCE, found in the make-up of the lowest floor. The author suggests these coins were placed for apotropaic reasons, as foundation deposits, or either hoarded prior to abandonment of the site. Both alternative explanations would make these coins either the earliest of latest coins at the site.

#### Varia.

This section comprises a number of studies and publications related to different aspects of ancient numismatics in the region. In his popular book *The Third Side of the Coin*, MESHORER (205) narrates the stories behind the coins he loved. The book includes anecdotes about collectors and collections, the development of coin collecting, production errors, modern Jewish numismatics, counterfeits and imaginary coins, ancient banking and taxation, tokens and hoards. At the beginning of his book *Not Kosher. Forgeries of Ancient Jewish and Biblical Coins*, HENDIN (204) quotes Cavedoni "Counterfeit coins are as old as coin minting, even older". The author describes and illustrates more than 550 forgeries he recorded from public and private collections. The author classifies them into categories: fantasy coins, copies, artistic fakes and deceptive forgeries. The catalogue includes the false sheqels, imaginary fantasies, and forgeries of ancient Jewish coins in chronological order.

ARIEL (198) publishes two fragments of flan molds from the Temple Mount excavations in Jerusalem. These pieces belong to the Judean group and may have served to mint coins for one of the Hasmonean or Herodian rulers. The author deals with the dating, distribution and technology of these flan moulds and compares them to similar material from Cyprus and Egypt.

A number of studies deal with metallurgical analysis of coins. LÖNNQVIST (202) performs a second investigation of the chemical composition of Procuratorial coinage of Judea. He uses ICP-AES analysis on 103 copper-alloy coins to determine the use of different copper alloys: a leaded tin-bronze and a pure tin-bronze alloy, the second one used in the years 17/18–31/32 CE. The author relates the disappearance of the lead to the construction of an aqueduct by Pilate in

the same period as told by Josephus. Notis, Shugar, Herman, and Ariel (203) perform a chemical composition analysis of the Isfiya and Qumran coin hoards, which constitute the two largest hoards of Tyrian sheqels and half-sheqels. The coins are analyzed using two analytical techniques: XRF (X-ray fluorescence unit) and EPMA (electron probe micro-analysis). The analysis showed that the coins are very pure silver, but for the period between 44 BCE and 15 CE, the level of silver concentration in both hoards drops significantly. The authors suggest a correlation between this destabilization with the instability of the Roman empire before the rise of Augustus, and the following re-stabilization of Roman mints. Moreover, they suggest a connection between the re-stabilization of the Tyrian shekel about 15 CE with the appearance of the control mark KP on these coins. Ponting (206) carries out a metallurgical analysis of the Gamla Jewish War coins. He concludes that the coins are made of low-tin bronze. The type differs from the other coins in the alloying, observed in the absence of lead. The Gamla coins fits best the Antipas coins in term of its lack of lead, but its lower tin content would also place it close to the coins of Agrippa.

## Weights.

Only studies related to numismatic topics of the region are mentioned here. HENDIN (212) publishes a catalogue of more than 450 ancient weights and pieces of pre-coinage, based on examples of his own collection. BARAG AND QEDAR (208) present a lead weight of the Nabatean king Malichus II dated to his last year of reign, 70 CE. DEUTSCH (209) publishes a lead weight of Hadrian with a Greek inscription, dated to 129/130 CE which served as prototype for Bar Kokhba weights. Another lead weight of irregular lozenge form mentioning emperor Hadrian is published by KUSHNIR-STEIN (217). DEUTSCH publishes another lead weight bearing the name of Shimon Bar Kokhba (Deutsch 210). The paleography and legend is like the one on the coins. The weight standard is the equivalent to 15 sela.

KUSHNIR-STEIN, the Israeli authority on ancient weights from the region, published a series of articles with new material, mostly from private collections. She first publishes five new Hellenistic lead weights from Palestine and Phoenicia. They all bear designs and Greek inscriptions, four of them dated by the Seleucid era. Four of them are attributed to Scythopolis-Bet Shean, Marisa, Berytus and Byblus (KUSHNIR-STEIN 213). In another article the author publishes two more Hellenistic lead weights at the Hecht Museum in Haifa, one undated weight from Arados and the other from somewhere in central Phoenicia (Berytus?), bearing a Greek inscription and dated to 119/118 BCE (according to the Seleucid era) (KUSHNIR-STEIN 215). Three more articles by the same author present weights manufactured in other cities: two

identical lead weights found in Caesarea Maritima which provide the first evidence for the use of Latin on weights in this area (KUSHNIR-STEIN 216), a number of so far unknown weights with typical Ascalonian designs (such as the city-goddess) taken from the coins of Ascalon (KUSHNIR-STEIN 73) and another eight lead pieces from Gaza, five of them bearing the Phoenician 'mem', first letter of the name Marnas, chief deity of the city (KUSHNIR-STEIN 212). She explains that the use of this symbol on weights was not as consistent as on coins.

She later publishes a lead weight of Agrippa II, which is very similar to another piece published many years ago (KUSHNIR-STEIN 214). Both weights have common characteristics in shape, decoration and distribution of legends. They were manufactured in two consecutive years (years 22 and 23 of the king) and most certainly at the same place (probably Migdal near Tiberias).

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# Abbreviations of journals:

AJN = American Journal of Numismatics

ARAM = ARAM Periodical. Society for Syro-Mesopotamian Studies.

IEJ =Israel Exploration Journal

INJ = Israel Numismatic Journal

INR = Israel Numismatic Research

RN = Revue Numismatique

*SCI* = Scripta Classica Israelica

SNR = Swiss Numismatic Revue

SC = The Numismatic Chronicle

ZDPV = Zeitschrift des Deutschen Palästina-Vereins

Palestine Exploration Quarterly JSP = Judea and Samaria Papers