

# A Babylonian Astronomical Diary in the Abbey Museum, Caboolture, Queensland

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**Abstract:** The paper presents an edition of a Babylonian astronomical diary dated to the reign of Seleucus IV. The diary is dated on historic and astronomic grounds to 175 BCE and serves, thus far, as the earliest mention for the reinstatement of a royal representative over the Esagil temple in Babylon during the late Seleucid period.

**Dedication:** The members of CANZ project acknowledge the passing of Dr Noel Weeks of the University of Sydney. Dr Weeks was the foremost lecturer in Akkadian and other cuneiform languages during his 40-year career. Indeed, the CANZ project has directly benefited from Dr Weeks in that Luis Siddall studied Akkadian under him for many years. We trust that this article on a scholarly cuneiform text is a fitting tribute to a man who did so much to keep the languages of the Ancient Near East alive for Australian students.

#### Introduction

The Abbey Museum of Art and Archaeology in Caboolture, Queensland, just north of Brisbane, Australia, is a small archaeological museum with holdings dating from prehistoric times through to modern times in Europe, Asia, Africa and the Americas. It is best known locally for its annual Medieval Festival, held each Southern Hemisphere winter in July. The museum is the new incarnation of the Abbey Folk Park, in New Barnet, London, founded by Rev. John S.M. Ward. His innovative folk park closed after the Second World War and some of the collection came to Australia where a new gallery to house the collection opened in 1986 (Ginn 2011; Agnew and Strong 1986; Strong 2006; & Strong 2016).

Among the holdings of the Abbey Museum is a small, but significant collection of cuneiform tablets which Luis Siddall (LS), Peter Zilberg (PZ) and Wayne Horowitz (WH) visited and studied as part of the Cuneiform in Australia and New Zealand Project (CANZ) (Siddall and Horowitz 2013, Siddall 2015, and Horowitz et al. 2015). The CANZ project wishes to thank the Abbey Museum for permission to study and publish the tablets in the Museum's collections, in particular Edith Cuffe (Director), Michael Strong (Senior Curator) and Jan Nargar (Registrar) for their overwhelming hospitality and enthusiasm during our visits to the Museum and Caboolture.

Ward was an intuitive eclectic collector, whose acquisitions ranged from prehistoric flints and Roman pottery to Japanese wood cuts and medieval stained glass, from Victorian bric-à-brac to ancient Egyptian and Mesopotamian antiquities. He was, perhaps, more interested in the human story than the artistic or cultural significance of his artefacts. From the 1920s, Britain experienced a growth of interest in collecting anything from postage stamps to antique porcelain. Previously, this had been the domain of the wealthy but then even the less well-off could acquire collectables for their personal delectation (Egginton 2017). Only a few collectors, Ward among them, progressed these personal collections to become small innovative museums like his entrepreneurial Folk Park. Many of the objects in the Folk Park came by way of donation solicited by Ward through British newspapers (Abbey Museum Archives 1934-39). However, one source of museum quality artefacts was a London antiquities dealer, George Fabian Lawrence (AKA Stoney Jack), of Wandsworth. It is most likely that this was the source of Ward's small group of Mesopotamian clay tablets. He kept only scribbled lists of his acquisitions, but these show that the clay tablets were acquired between 1934-1937, two years before George Fabian Lawrence passed away. Although Lawrence was mainly interested in British antiquities, various British museums have records that cuneiform tablets were purchased from him (Hicks 2013: 457), and he is well known for selling the British Museum some of their Luristan Bronzes from Iran. The collection includes a fragment of an astronomical diary of the type edited in the series Astronomical Diaries and



Figure 1: Abbey Museum, Caboolture, Queensland. Image: courtesy Abbey Museum.

*Related Texts from Babylon* (ADART) by Hermann Hunger (HH) and Abraham Sachs. An overview and edition of the earliest group of these texts is available in ADART I.

Initially, LS studied the collection and MS had provided photographs of the Astronomical Diary fragment to HH, who completed a preliminary edition of the tablet. This edition was made available to PZ and WH who collated the tablet and completed an improved edition, which was then sent to HH for his comments and suggestions. The edition below is thus the product of all the contributors listed as authors of this paper, but final responsibility for any errors or misunderstandings in the edition, and the other parts of this article including the commentary, and discussion that follows are to be blamed solely on PZ and WH. A related article on the Juniper Garden of Babylon is published in this volume of *Buried History* Horowitz (2020).



*Figure 2A:* Obverse, Babylon Astronomical Diary. Reg No W00589, Dimensions 97 x 73 x 26. Image: Courtesy of the Abbey Museum, Caboolture



*Figure 2B:* Reverse, Babylon Astronomical Diary. Reg No W00589, Dimensions 97 x 73 x 26. Image: Courtesy of the Abbey Museum, Caboolture

# Upper Edge

- 1'. [...] <sup>m</sup>Se-lu-ku LUGAL
- 2'. [(...)]

# Obverse

- 1. [...] x x x x x x x x x x [...]
- 2. [...D]IRI.SAL.AN.ZA SI GIN 3 SAG.G[E<sub>6</sub>...]
- 3. [...] x x <sup>r</sup>SI<sup>1</sup> GIN 4 DIRI.SAL.AN.ZA SI G[IN...]
- 4. [...]x x x x x <sup>r</sup>SAG HUN<sup>1</sup> 2 KÙŠ 30 x KÙŠ *ana* ÙLU SÍG x x [...]
- 5. [...] x ÙLU GIN x x x x [x TÙ]R KÁ-šú ana ÙLU BAD 'DIRI.AN.ZA' [...]
- 6. [...] x GÍR.GÍR <sup>r</sup>GÙ-*u* MAH AN DUL-*hat*<sup>1</sup>[ x x ] GE<sub>6</sub> 6 SAG.GE<sub>6</sub> 30 *ina* IGI MÚL.MÚ[L ...]
- 7. [... Z]A IM.DUGUD *i-sa ina* KI[N.SI]G DIR[I.AN.Z]A GE<sub>6</sub><sup>T71</sup>SAG.GE<sub>6</sub> 30 *e* GIŠ.DA (*is*  $le_{10}$ ) 1 K[ÙŠ ...]
- 8. [...] x x x x x [ x x ] x x G[E<sub>6</sub> 8] SAG GE<sub>6</sub> 30 SIG *šur* GIGIR *šá* SI 2 KÙŠ [...]
- 9. [... G]E<sub>6</sub>9 SAG GE<sub>6</sub> 30 e MÚ[L *á*]*r še-<sup>r</sup>pit*<sup>1</sup> [MAŠ].MAŠ x KÙŠ 30 *i-ṣa ana* NIM DIB DIR.AN.ZA [...]
- 10. [... 30 TÙ]R NÍGIN ÙLU GIN x x x GE<sub>6</sub> 10 'SAG' GE<sub>6</sub> 30 *ina* IGI MAŠ.MAŠ IGI 2 KÙŠ 30 3 KÙŠ *ana* 'ULÙ SIG' [...]
- 11. [... DIR.A]N.ZA ÙLU.<sup>r</sup>NE 1-en bu<sup>2</sup>-tuq-tú <sup>d</sup><sup>1</sup>TIR.AN.NA TA ÙLU ana SI GIB GE<sub>6</sub> 11 SAG G[E<sub>6</sub>...]
- 12. [... D]IR.AN.ZA 30 'TÙR' SAG NIGIN' ma-diš iq-tur, GENNA ana UGU' DUR-šú ana NIM GUB [...]
- 13. [... G]IN 1 1/2 KÙŠ ana SI NIM DIR. 'SAL.AN'. ZA 30 TÙR NU KÁD NÍGIN GE<sub>6</sub> 13 'SAG' G[E<sub>6</sub> ...]
- 14. [...] 'ZA ÙLU ŠÁR' GE, 14 6,40 ME DIR NU PAP SAG GE, ŠÚ ŠÚ ÙLU GIN [...]
- 15. [...] x x x x IGI.MEŠ È AN.BAR<sub>7</sub> AN UTAH *i-ṣa*  $GE_6$  [...]
- 16. [...] x x x x x X SI GIN  $GE_6 15$  SAG  $G[E_6 ...]$
- 17. [...] x x x x 16 GU<sub>4</sub>.UD *ina* NIM *ina* GÍR.TAB ŠÚ NU.[PAP ...]
- 18. [... DIR]I.SAL.AN.ZA kal GE<sub>6</sub> ŠÚ ŠÚ ÙLU ŠÁR 1[7 ...]
- 19. [...] x x x 30 ina IGI MÚL e šá SAG G[ÍR.TAB ...]
- 20. [...] x x x x x x x x [...]
- 21. [...] x ŠÚ ŠÚ x [...]

# Reverse

- 1'. [...] x x [ ...]
- 2'. [...] <sup>[</sup>16<sup>]</sup>GU<sub>4</sub>.UD *ina* ŠÚ *ina* ZIB[<sup>me?</sup>...]
- 3'. [...EN] <sup>[6]</sup> 5 SI LAL PAP 7 *na* <sup>[</sup>TA 7 EN 13 *na*<sup>]</sup> 8 x x [x (x)]
- 4'. [...] È 19 4 SI šá e ILLU ŠÚ LAL na ina KIN<sup>?</sup>.SIG TA x [(x)]
- 5'. [...L]UGAL ina <sup>uru</sup>An-tu-ki-'a-a šá ana muh-hi [<sup>i</sup>]<sup>d</sup>ma-rat-tu[m]
- 6'. [...] <sup>r</sup>É<sup>1</sup> mil-ki šá ina GIŠ.KIRI<sub>6</sub> GI[Š.Š]IM.LI <sup>lú</sup>NAGAR<sup>[meš]</sup> šá É-sag-gíl x [ x ]
- 7'. [... É]-sag-gíl <sup>m</sup>Ba-rak-ku-a <sup>lú</sup>za-zak-ku u UKKIN šá LÚ.K[Ù.DIM.MEŠ]
- 8'. [... <sup>h</sup>ŠÀ.TAM *É-sag-gíl u* <sup>h</sup>]E.KI.MEŠ ana NÍG.GA *É-sag-gíl* KU<sub>4</sub>-ub ITU.BI
- 9'. [... <sup>uru</sup>Se-lu-ke-'a]-<sup>r</sup>a<sup>1</sup>šá ana muh-hi <sup>id</sup>IDIGNA u <sup>id</sup>LUGAL KIN-á[r]

11'. [MU 1 ME 36].KÁM "Se-lu-ku LUGAL

# Upper Edge

- 1'. [...] king Seleucus
- 2'. [(...)]

<sup>10&#</sup>x27;. [...]

# Obverse

- 2. [...th]in clouds were in the sky, the north-wind blew, 3rd of the month, beginning of the nig[ht ...]
- 3. [...] . . the north wind blew. 4th of the month, thin clouds were in the sky, the northwind b[lew ...]
- 4.  $[\dots] \dots 2$  cubits behind the head of 'the Hired Man' ( $\alpha$  Arietis), the Moon being . cubits low to the south . .  $[\dots]$
- 5. [...] . the southwind blew . . . . [ . a hall]o with its gate open to the south, clouds were in the sky [...]
- 6. [...]. lightning flashed, much thunder, rain ...[...] night of the 6th, start of the night the Moon in front of 'the Star[s' (Pleiades)...]
- [... thin clouds were in the sk]y a little fog, in the af[terno]on clou[ds were in the s]ky. Night of the 7th, beginning of the night, the Moon was 1 c[ubit] above the Jaw of the Bull (α Tauri) [...]
- 8. [...]....[..]. Nig[ht of the 8th], beginning of the night, the Moon was 2 cubits below 'the northern (variable star) of the Chariot (β Tauri). [...]
- [... Nig]ht of the 9th, beginning of the night, the Moon was . . . cubits above the re[ar ... s]tar of 'The [Tw]ins' feet (μ Geminorum) the Moon passed a little to the east, clouds were in the sky [...]
- [... the Moon] was surrounded by a [ha]lo, a southwind blew . . . . Night of the 10th, beginning of the night, the Moon was 2 cubits in front of the front 'Twin' star (α Geminorum), the Moon, 3 cubits low to the south [...]
- 11. [... clouds were in t]he sky, hot southwind, one section of a rainbow stretched from south to north, Night of the 11th, beginning of the nig[ht ...]
- 12. [... cl]ouds were in the sky, the moon was surrounded by a halo at its top, it billowed very much. Saturn stood on its (the halo's) band to the east [...]
- 13. [... wen]t 1 and 1/2 cubits to the east, clouds were in the sky, the moon was surrounded by a halo that was not closed. Night of the 13th, beginning of the nig[ht ...]
- 14. [... clouds were in the s]ky, the southwind gusted. Night of the 14th, moonrise to sunset 6,40, cloudy, I did not watch. Beginning of the night, very overcast, the southwind blew [...]
- 15. [...] .... were seen, came out, around noon a little light rain, darkness<sup>2</sup> [...]
- 16. [...] . . . . . . the southwind blew. Night of the 15th, beginning of the nig[ht ...]
- 17. [...] . . . . 16th, Mercury in the east in 'The Scorpion' set. I did not [watch ...]
- 18. [... cl]ouds were in the sky all night, very overcast, the southwind gusted. The 1[7th ...]
- 19.  $[\dots]$  the Moon in front of the upper star of the head of 'The S[corpion ( $\beta$  Scorpii)  $\dots$ ]
- 20. [...]......[...]
- 21. [...] . very overcast . [ ...]

# Reverse

- 1'. [...]..[...]
- 2'. [...] the 16th, Mercury in the west in 'The Tails[s' (Pisces) ...]
- 3'. [... until the] 6th, 5 fingers the river level receded, total 7 was the *na*(-gauge). From the 7th to the [1]3th the *na*(-gauge) was 8 . . [..]
- 4'. [...]. it rose. On the 19th, 4 fingers above the normal peak flood on the *na*(-gauge). In the afternoon from . [.]
- 5'. [... the k]ing in Antiochia which is on the Se[a]
- 6'. [... the hou]se of the council which is in the Ju[ni]per Garden, the carpenters of Esagil . [ . ]
- 7'. [... E]sagil, Barakku'a the *zazakku*-official and the assembly of the go[ldsmiths]
- 8'. [... the administrator of Esagil and the] Babylonians has entered the treasures of Esagil. That month
- 9'. [... to Seleuci]a on the Tigris and the King's Canal he sen[t]
- 10'. [(...)]
- 11'. [Year 136] king Seleucus

#### Notes

Obv. 1 The line is rather fragmentary, but one can suggest reading the preserved signs as:  $r_{a-pir}$  muš ina<sup>1</sup> x '... earthshine, measured ...'

Obv. 6 For DUL-*hat* as a yet unidentified weather phenomena, see ADART I 30.

Obv. 8 For this still unidentified part of the Chariot constellation see ADART I 29 = nasrapu.

Obv. 15 GE<sub>6</sub> at the end of the line cannot begin the entry for the next night the 15th, which begins in the next line.

Rev. 5' For the equation of this toponym with Antiochia on the Orontes, see Van Der Spek 1997/1998; Horowitz and Gera 1997. For additional sources which mention this toponym see AD -155A; AD -149A; AD -143C; BCHP 12.

Rev. 6' Bīt-milki 'house of council/ deliberation house' is mentioned in cuneiform sources from the Parthian period. An astronomical diary (AD -93 obv. 25) mentions that the 'house of council' was the place where scrolls were read to the temple administrator (Akk. šatammu) and the assembly (Akk. kiništu) of Esagil (Boiy 2004: 202-204; Van der Spek 1998: 225-226). Thus, 'The house of council' might have served as a place where legal disputes were heard (Hackl 2013: 304-305), and as an important gathering place where orders from the king were read (Van der Spek 2009: 109, 113). Furthermore, the 'house of council' appears as the title of Rahīm-Esu, who was designated as the 'guard of the council house' in several texts from the Parthian period (Van der Spek 1998: nos. 13, 23). However, as noted already by Jursa (1997: 131), his title probably referred to a council house of Esabad (temple of Gula in Babylon) and not that of Esagil.

Rev. 7' The *zazakku*-official is mentioned several times in the astronomical diaries: AD -168A r 14'; AD -168B r 13'; AD -168C1 r 6'; AD 163C r 17'. A deputy of the *zazakku* is also mentioned in a chronicle from the reign of Antiochus V (164–162 B.C.), which records a case of gold theft from the Esagil temple (BCHP 15). These instances date to the reigns of Antiochus IV and V, but none mention a *zazakku* official by his personal name. For the suffix u'a (=*aw*)/ $u'\ddot{a}$  in West-Semitic and Late-Babylonian names, see Zadok 1977: §11251113; §112536.

Goldsmiths are mentioned once in an unclear context in AD -175B, which dates to the same year as our text (see below), and in two additional diaries from -168 B.C. (AD -168A and -168B), together with the *zazakku*-official. The latter two describe an event in which treasures and property of Esagil were given to the *zazakku*-official and the assembly of the goldsmiths.

For a discussion of assemblies (Akk. *kiništu*), see Hackl 2018.

Rev. 8' The treasures or property of Esagil (NÍG.GA  $\acute{E}$ -sag-gíl) are mentioned several times in the astronomical diaries: AD -330A r 5'; AD -168A r 14'; AD -165A r A6'<sup>(2)</sup>; AD -132C r 27'.

#### **Discussion and Date**

The obverse of the present text begins as expected at the start of what we suppose is month XI. Clear skies with some thin clouds allow for observations of the Moon and stars, but the weather has changed by the 5th of the month which is marked by a thunder-storm. As in the Jewish, Muslim, and some Christian liturgical calendars, the Babylonian day begins at sunset of the previous 24-hour period. Hence the Jewish sabbath on Saturday begins on Friday night.

A few nights of good weather follow from the 6th to the 10th, but by the day of the 10th the weather again changes, with an apparent wind blowing in from the south, bringing with it what must have been rain showers since the diary reports clouds, and then a rainbow (that) stretched from south to north. That night, the night of the 11th, the skies cleared allowing the astronomers to report observations of the Moon, Saturn, and Mercury. From the 13th onwards the clouds close in with light rain reported on the 14th of the month, but with enough clear skies for a report of Mercury in Scorpio on the 16th. After this, as the text breaks away towards the end of the obverse as overcast conditions predominate. The reverse of the tablet picks up with astronomical observations for the end of the last month of the diary with an observation of Mercury recorded for the 16th of Month XII. Although one would expect high day numbers at the end of a monthly paragraph, we assume that the statement regarding Mercury can be considered as part of the surviving planetary summary.

Lines 3'-4' of the reverse provide the reader with a report on the river level of the Euphrates at Babylon as measured on the *na*-gauge or scale (ADART I 34–36), followed by an historical notice (Pirngruber 2013; Tuplin 2019). The notice makes mention of the Esagil temple, the Juniper Garden and the house of council which was situated in the garden's compound in Babylon (Horowitz 2020). Furthermore, it refers to Antiochia on the Orontes, Seleucia on the Tigris and the King's Canal.<sup>1</sup> The partially preserved date formula requires that the diary be placed in the reign of Seleucus (I–IV).

The diary mentions the *zazakku*-official in connection with property of the Esagil temple in Babylon. In Seleucid Babylonia, this office seems to be attested so far only after 168 BCE, during the reigns of Antiochus IV-V. The *zazakku* was an official appointed by the king who served as the royal representative in the temple. The office seems to have been discontinued during the Achaemenid period and reinstated only in the late Seleucid period. The latest attestations of the *zazakku* in Achaemenid Babylonia are given by Kleber (2017: 703) and Beaulieu (1993), and for Neo-Babylonian and Seleucid times Dandamaev (1994), Joannès (1994), MacGinnis (1996), Clancier (2012: 316–318), Monerie (2018: 383), Del Monte (1997: 79) and McEwan (1981: 27).

As stated above, this astronomical diary should be dated to the reign of Seleucus I–IV. Therefore, as all other attestations of this official date to the reign of Antiochus IV–V, the text should be placed in the reign of Seleucus IV, the older brother of Antiochus IV, who ruled the Seleucid empire between 187–175 BCE. Furthermore, the Mercury and lunar data that appear in the text clearly suggest that the text preserves observations for months XI–XII of 136 SE, i.e. 175 BCE. According to computation provided by HH, the Mercury phenomenon occurred on month XII, day 17, 175 BCE. This fits the preserved text on line 2' of the reverse and secures the date of the tablet.

Unfortunately, due to the fragmentary state of the text, the exact course of historical events is difficult to reconstruct. However, we can suggest that the office of the *zazakku* had already been reinstated during the reign of Seleucus IV. The reinstatement of a royal representative over Esagil might have been prompted, at least in part, by pressing financial needs and political instabilities. Boiy (2004: 210, 224) and Geller (1991: 2) have already suggested that the office of the *zazakku* was reinstated in order to tighten the royal control over the temple's income in Babylon. This seems to be the case also in other regions of the Seleucid empire during the reign of Seleucus IV, who appointed officials in temples, levied new taxes and abolished certain privileges across the Seleucid empire.<sup>2</sup>

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#### Abbreviations

AD Astronomical Dairy

ADART A.J. Sachs, & H. Hunger, *Astronomical Diaries and Related Texts from Babylonia*, Wien: Verlag der Österreichischen Akademie der Wissenschaften.

BCHP I.L. Finkel, R.J. van der Spek, R. Pirngruber, *Babylonian Chronographic Texts from the Hellenistic Period*, Atlanta: SBL, 2020.

CIIP IV W. Ameling, H.M. Cotton, W. Eck, A. Ecker, B. Isaac, A. Kushnir-Stein, H. Misgav, J. Price, P. Weiß, & A. Yardeni, *Corpus inscriptionum Iudaeae/Palaestinae*, Volume IV: Iudaea/Idumaea, 2649–3978, Berlin & Boston: De Gruyter, 2018.

#### **Bibliography**

- Abbey Museum Archives 1934-1939 *Book of the Centuries*, 3 vols. Newspaper and magazine clippings documenting the acquisition of the stained glass in three cuttings books.
- Agnew, M.K., and M. Strong 1986 A Museum Reborn: The Abbey Museum in Australia, *Museum* 158, 87–90.
- Beaulieu, P.-A. 1993 An Episode in the Fall of Babylon to the Persians, *Journal of Near Eastern Studies* 52, 241–261.
- Boiy, T. 2004 Late Achaemenid and Hellenistic Babylonia. Leiden: Peeters.
- Clancier, P. 2012 Le Šatammu, l'Assemblée de l'Esagil et les Babyloniens-Les Notables de Babylone du relais local à la marginalization, in Chr. Feyel et al. eds *Communautés locales et pouvoir central dans l'Orient hellénistique et romain*, Études Anciennes 47. Nancy: A.D.R.A., 298–327.
- Cotton-Palitel, H.M., A. Ecker & D. Gera, 2017 Juxtaposing Literary and Documentary Evidence: A New Copy of the So-Called Heliodoros Stele and the Corpus Inscriptionum Iudaeae/Palaestinae (CIIP), *Bulletin of the institute of Classical Studies* 60, 1–15.
- Dandamaev, M.A. 1994 The Neo-Babylonian zazakku. *Altorientalische Forschungen* 21, 34–40.
- Del Monte, G. 1997 *Testi dalla Babilonia Ellenistica,* Vol. I. Pisa-Roma: Istituti Editoriali e Poligrafici Internazionali.
- Egginton, H. 2017 In Quest of the Antique: The Bazaar, Exchange and Mart and the Democratization of Collecting, 1926–42, *Twentieth Century British History*, 28, 2, 159–185.
- Geller, M.J. 1991 New Information on Antiochus IV from Babylonian Astronomical Diaries, *Bulletin of the School of Oriental and African Studies* 54 (1), 1–4.

Gera, D. 1997 Judaea and Mediterranean Politics 219 to 161 B.C., Leiden: Peeters.

Hackl, J. 2013 Materialien zur Urkundenlehre und Archivkunde der spätzeitlichen Texte aus Nordbabylonien (Unpublished PhD dissertation), Vienna: University of Vienna.

Hackl, J. 2018 The Esangila Temple During the Late Achaemenid Period and the Impact of Xerxes' Reprisals on the Northern Babylonian Temple Households, in C. Waerzeggers & M. Seire eds *Xerxes and Babylonia- The Cuneiform Evidence*, Leuven: Peeters, 165-188.

Horowitz, W. & D. Gera, 1997 Antiochus IV in Life and Death: Evidence from the Babylonian Astronomical Diaries, *Journal of the American Oriental Society* 117/2, 240 –252.

Hicks, D. 2013 Asia and The Middle East, World Archaeology at the Pitt Rivers Museum, Oxford: Archeopress.

Horowitz, W., S. Reeves, L. Stillman, M. White, P. Zilberg, 2015 Cuneiform Texts in The Otago Museum: A preliminary report, *Buried History* 51, 57–60.

Horowitz, W., 2020 The Juniper Garden of Babylon and The Funeral of Alexander the Great, *Buried History* 56, 57–60.

Joannès, F. 1994 À propos du zazakku néo-babylonien, Nouvelles Assyriologiques Brèves et Utilitaires 1994, 103.

Kleber, K. 2017 Administration in Babylonia, in B. Jacobs, W.F.M. Henkelman & M.W. Stolper eds Administration in the Achaemenid Empire Tracing the Imperial Signature, Wiesbaden: Harrassowitz Verlag, 699–714.

MacGinnis, J. 1996 A further note on the zazakku, *Nouvelles Assyriologiques Brèves et Utilitaires* 1996/29.

McDonald, A.H. 1967 The Treaty of Apamea (188 B.C.), *Journal of Roman Studies* 57, 1–8.

McEwan, G. 1981 *Priest and Temple in Hellenistic Babylonia*, Wiesbaden: Franz Steiner Verlag.

Monerie, J. 2018 L'économie de la Babylonie à l'époque hellénistique, Berlin & Boston: De Gruyter.

Paltiel, E. 1979 The Treaty of Apamea and the Later Seleucids, *Antichthon* 13, 30–41.

Pirngruber, R. 2013 The Historical Sections of the Astronomical Diaries in Context: Developments in a Late Babylonian Scientific Text Corpus, *Iraq* 75, 197–210.

Rappaport, U. 2011 Did Heliodoros Try to Rob the Treasures of the Jerusalem Temple? Date and Probability of the Story of II Maccabees 3, *Revue des études juives* 170, 3–19. Scolnic, B. 2016 Heliodorus and the Assassination of Seleucus IV according to Dan 11:20 and 2 Macc 3, *Journal of Ancient Judaism* 7, 354–384.

Siddall, L.R. 2015 Cuneiform Texts in Australian Public Collections: Phase One Complete, *Buried History* 51, 55–56.

Siddall, L.R., & W. Horowitz, 2013 Cuneiform in Australian and New Zealand Collections: A First Glimpse, *Buried History* 49, 53–56.

Spek, R.J. Van Der 1997/1998 New Evidence from the Babylonian Astronomical Diaries Concerning Seleucid and Arsacid History, *Archiv für Orientforschung* 44/45, 167–175.

Spek, R.J. Van Der 1998 Cuneiform documents on Parthian history: The Rahimesu archive. Materials for the study of the standard of living, in J. Wiesehöfer ed. *Das Partherreich und seine Zeugnisse*, Stuttgart: Franz Steiner Verlag, 205–258.

Spek, R.J. Van Der 2009 Multi-ethnicity and ethnic segregation in Hellenistic Babylon, in T. Derks & N. Roymans, eds *Ethnic Constructs in Antiquity-The Role of Power and Tradition*, Amsterdam: Amsterdam University Press, 101–115.

Strong, M.K. 2006 Unexpected Treasures: Highlights from the Abbey Museum, Caboolture, Qld: Abbey Museum of Art & Archaeology.

Strong, M.K. 2016 John Ward: The Man who Collected Houses, *British Archaeology*, May–June, 34–41.

Taylor, M.J. 2014 Sacred Plunder and the Seleucid Near East, *Greece & Rome* 61 (2), 222–241.

Tuplin, C. 2019 Logging History in Achaemenid, Hellenistic and Parthian Babylonia: Historical Entries in Dated Astronomical Diaries, in J. Haubold, J. Steele & K. Stevens eds *Keeping Watch in Babylon -The Astronomical Diaries in Context*, Leiden & Boston: Brill, 79–119.

Zadok, R. 1977 On West Semites in Babylonia during the Chaldean and Achaemenid Periods, Jerusalem: Tel Aviv University.

#### Endnotes

- For Seleucia on Tigris see for example the following attestations: AD -171B; AD -178C; AD -179B; AD -181; AD -187A; AD -251. For Seleucia on Tigris and the King's Canal see AD -162; BCHP 14: 5-6.
- 2 For a detailed discussion of the abolition of privileges on certain communities and the taxation of temples by Seleucus IV, in light of the so called Heliodoros stele (CIIP IV 3511-2) and additional documents, see Cotton-Paltiel, Ecker and Gera 2017. The financial constraints were caused, at least in part, by the Apamea treaty (McDonald 1967; Paltiel 1979; Gera 1997: 90). For a discussion of the well-known passages that preserve an echo of this episode in the book of Daniel (11 20) and 2 Macabees 3, see Scolnic 2016; Rappaport 2011. For temple despoliation as a standard procedure in the Seleucid empire, see Taylor 2014.