Supplemental Text

Izapa Chronology

The chronology we adopt (Figure 2) follows John Clark's recent reassessment (Lowe et al. 2013) of the original published phase limits (Lowe et al. 1982). For example, the Guillén phase dates from 300–100 B.C. and the Hato phase from 100 B.C.–A.D. 100 instead of 300–50 B.C. and 50 B.C.–A.D. 100, respectively. There is actually little difference between such relative chronologies, but our aim is to keep confusion in the published literature of Izapa to a minimum. We would not argue with moving any phase limit by 50 or 100 years earlier or later. This is certainly the case when anchoring ceramic chronologies with old radiocarbon dates.

Even recent AMS dates, with 20-year sigmas, cannot generate less than a hundred-year error range if we remember that statistical probabilities are not points in time. Two sigmas of a 20-year range will produce an 80-year error range and 3-sigmas will result in a 120-year error range. Using radiocarbon dates to argue for a chronological precision of less than 100 years results in a false level of accuracy, regardless of Bayesian (or other) adjustments. Greater precision of radiocarbon dates can only be generated if a single past event (such as the burning of a floor) is dated multiple times in which case all dates must converge on a single year. Despite the inherent limitations of radiocarbon dating for obtaining a precise date, when ceramics of changing styles are repeatedly documented in stratigraphic sequence, we can be confident in the reality of the relative sequence of a chronology.

The presence of many foreign ceramics and ceramic styles in offerings at Izapa allowed the NWAF researchers to develop such a detailed and robust ceramic chronology for the site (Lowe et al. 1982, 2013). Unfortunately, however, the offering ceramics used to define the Post-Formative ceramic sequence at Izapa (Lee 1973) often included decorated ceramic types not

likely to be encountered on survey. We recognize that this current state of understanding of the Izapa ceramic chronology during the first millennium A.D. may have inadvertently skewed our results. This is especially a concern for the Hato phase, where the appearance of Miraflores ceramics (Demarest and Sharer 1986) helped to define the assemblage, and for the Middle Classic Loros and Metapa phases, which included ceramics with Teotihuacan-style characteristics.

While Mendelsohn's (2016) work has helped to identify non-offering ceramics associated with the Hato, Itstapa, and Jaritas phases (building on Clark and Cheetham's [2005] definition of the Hato and Itstapa ceramic complexes in the Mazatán region), the description of the Hato ceramic complex at Izapa is still limited compared to decorated ceramic ware types. The Itstapa ceramic complex continues to be problematic in its relationship to both the Hato and Jaritas ceramic complexes. John Clark has also experienced difficulty in dividing the Hato and Itstapa ceramic assemblages from materials encountered in survey collections from the Mazatán region. If later studies were to indicate that the Itstapa ceramic complex is, in fact, a utilitarian or localized component of the Hato ceramic complex, our understanding of a population decline at Izapa during the Hato phase would also change. The results presented here reflect our current understanding of the archaeological record at Izapa. We recognize that, as a better understanding of the Izapa chronology develops with additional excavation, our understanding of these survey results may change. With such general observations in mind, we turn to the Izapa chronology in the centuries around the beginning of the first millennium A.D.

Late and Terminal Formative Chronology

The IRSP survey results presented in this paper are relevant to ongoing debates about the chronology of Terminal Formative (also known as Protoclassic)[1] occupations in southern Mesoamerica. Recent chronological revisions proposed by Inomata et al. (2014:398–399) question the timing of the apogee of Izapa, the Guillén phase (100–300 B.C.). The dating of Guillén-phase ceramics and associated monument production at Izapa does not correlate well with recent reconstruction of other regions of southern Mesoamerica proposed by these scholars. The lack of congruence has led them to question whether the chronological placement of the Izapa monuments is correct. Inomata and colleagues propose that the Izapa monuments may have been erected in the Terminal Formative period (after 100 B.C.). If the events associated with the erection of the Izapa monuments were moved a few centuries later, they argue, Izapa would have been one of many contemporaneous centralized polities that depicted rulers on stone stelae. However, if the Izapa stelae were to have been erected during the Guillén phase, and if this phase were to date to 300–100 B.C., then the Izapa polity would have been the center of (and inspiration for) the Izapan art style that was later adopted by other polities (a scenario originally proposed by Coe [1965]).

The IRSP has not collected data that can directly evaluate the association of the Izapa monuments with the Guillén phase or assign them a date between 300–100 B.C. However, the Izapa ceramic chronology developed by the NWAF for the Formative to Classic-period transition (Lowe et al. 1982, 2013) is consistent with recent excavations and radiocarbon dating undertaken by Mendelsohn for her dissertation (Mendelsohn 2016). IRSP excavations at Izapa also

[1] The authors have chosen to apply the term "Terminal Formative," rather than "Protoclassic" in response to recent criticisms that the term "Protoclassic" has been used to describe ceramic characteristics common in the Maya lowlands as well as a time period of various lengths (Brady et al. 1998; Callaghan et al. 2014). In the Izapa report, Lowe and colleagues (1982:135) referred to the Hato and Itstapa phases as "Terminal Preclassic or 'Protoclassic'." We therefore apply the term "Terminal Formative" to specify that we refer to these two phases that span the period from 100 B.C.-A.D. 200, rather than a ceramics-based construct.

documented Frontera and Guillén occupations in stratigraphic sequence with AMS dating of the former (Rosenswig et al. 2014). Regional settlement survey data indicate that Frontera-phase monumental centers continued to be occupied during the Guillén phase (Rosenswig et al. 2016). Evidence from both the IRSP and Mendelsohn's Izapa Household Archaeology Project support the chronology developed by Lowe et al. (1982, 2013).

Key to Inomata et al.'s (2014) hypothesis for Izapa is the occupation of the site during the Hato phase (100 B.C.–A.D. 100). Though some Hato phase ceramics were recovered from mounds at the western edge of the Formative-period monumental center, Hato phase remains are largely absent from the site (Figure 4A) leading us to infer a political and demographic disruption. This interpretation is consistent with what Lowe et al. (1982:194) originally argued and John Clark continues to maintain (Lowe et al. 2013:85). Lowe et al. (2013:85) observe that during the Hato phase "that building activity virtually cease in Central Izapa and that there was limited occupation in northern Izapa, Group F." However, because some of the most elaborate burials documented in Mound 30 are from the Hato phase (Lieske 2013), and the small Mound 61 was an elite residence (Clark and Lee 2013) at this time, they speculate that "maybe priests or caretakers continued to reside at Central Izapa among the ancient mounds and monuments" (Lowe et al. 2013:85). Redating Mound 61 and Hato-phase burials in Mound 30 does not change the overall demographic patterns at Izapa (or the surrounding piedmont) but instead reinforce how dramatically different the use of the site was compared to the previous half millennium of occupation.

The Izapa The Hato phase (100 B.C. – A.D. 100) corresponds to the time when would expect the Izapa monuments to be dated to if their erection was synchronous with their revised chronology of neighboring polities. If the erection of monuments were associated with the Hato

phase, one might expect to see more ceramics associated with occupation and construction in Izapa's central zone at this time. Instead, the IRSP survey reinforces NWAF excavation results (Lowe et al. 1982, 2013), documenting scant Hato-phase remains at Izapa during this period when monument production and major construction ceased. Izapa may therefore represent an exception to the revisionist model proposed by Inomata and colleagues (2014; Inomata and Henderson 2016).

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