

**Ecology and Morphometric Analysis of Harris Mud Crab (*Rhithropanopeus harrisi*)
in Lake Texoma**

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**ECOLOGY AND MORPHOMETRIC ANALYSIS OF HARRIS MUD CRAB
(*RHITHROPANOPEUS HARRISII*) IN LAKE TEXOMA**

A THESIS

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ABSTRACT OF THESIS

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TITLE OF THESIS: Ecology and Morphometric Analysis of Harris Mud Crab
(*Rhithropanopeus harrisi*) in Lake Texoma

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ABSTRACT: Harris mud crab, *Rhithropanopeus harrisi*, is a small euryhaline crab native to the brackish waters of the Atlantic coast of North America. *R. harrisi* was discovered in Lake Texoma in 2008 and are thought to have originated from Texas estuaries. To date, there have been no comprehensive studies conducted on the Lake Texoma population of Harris mud crab. The objectives of this project were to 1) record sex and morphometrics, 2) note microhabitat preferences, 3) determine reproductive periods, 4) document current distribution, and 5) estimate the population size of *R. harrisi* in Lake Texoma over a decade following the initial discovery. Six sampling sites were established along a transect from the OU Biological Station to near the Denison Dam. Sites were sampled from August 2019 to August 2021. A total of 1,396 crabs were observed with 1,326 collected for analyses. Results showed the majority of crabs in Lake Texoma were right-handed. There was no significant difference in average carapace width between males and females, however males made up the highest percentage of the upper size classes. Males also attained larger claw sizes than females likely due to

intraspecific competition for females. Both sexes of *R. harrisii* in Lake Texoma are smaller in terms of body size than crabs from other geographic locations. Small size could be the result of stressful conditions or early fatality. A male-biased sex ratio was observed in the Lake Texoma population. Abundance and distribution of crabs varied across the lake, likely due to salinity values and microhabitat availability of each site. Population densities in Lake Texoma were higher than those observed in other locations but the densities of crabs at each site were extremely patchy. Seasonal trends established a difference in crab frequency during the warm and cool seasons. A drop in lake level during late winter of 2020 confirmed that the crabs migrate to deeper water to take refuge from the cold temperatures. The presence of larvae and gravid females suggests a reproductive period from June to October and confirms the successful establishment of Harris mud crab in Lake Texoma. This project will provide state and local officials with baseline information and methodology they can use to monitor the Lake Texoma population of Harris mud crab in the future. Lastly, this study will provide a greater overall understanding of the invasive Harris mud crabs in a freshwater, reservoir habitat.

THESIS INTRODUCTION

Harris mud crab, *Rhithropanopeus harrisi*, is a small euryhaline crab belonging to the family Panopeidae (formally Xanthidae) (Marco-Herrero et al. 2014). Panopeidae contains 25 morphologically similar genera of true crabs (Schubart et al. 2000), all possessing a short abdomen hidden under the thorax (Guinot & Bouchard 1998). Most members of the family Panopeidae live in soft-bottomed habitats, lending them the name “mud crabs” (Schubart et al. 2000). Harris mud crab is the only species within the genus *Rhithropanopeus*. Synonyms from the past include *Heteropanope tridentata*, *Pilumnus harrisi*, and *Pilumnus tridentatus*.

Rhithropanopeus harrisi has a subquadrate carapace no larger than 27 mm wide (Turoboyski 1973). Greatest width occurs at four pair of anterolateral teeth. The first and second teeth are fused and inconspicuous, while the third and fourth teeth are dentiform. Carapace width ranges from 4.1 to 26.1 mm in males and 4.4 to 19.0 mm in females. Carapace color varies from brown to olive green with maroon blotches (Ryan 1956). The upper surface of the carapace is granular in juveniles, but smooth in adults (Rathbun 1930, Williams 1984). Chelipeds are unequally sized and dissimilar, with the major chela often curved and dexter (Hegele-Drywa et al. 2014). Walking legs are long, slender, and hairy. The fifth pair of legs are not modified for swimming (Ryan 1956).

Many crab species, including *R. harrisi*, are sexually dimorphic. Male Harris mud crabs attain larger sizes than females (Czerniejewski & Rybczyk 2008, Hegele-Drywa et al. 2014). The male’s abdomen also bears five segments and appears narrower than that of the female (Hegele-Drywa et al. 2014). Hegele-Drywa et al. (2014) found that males have a significantly longer major chela than females with the same carapace

width. The wet weight of *R. harrisii* tends to differ between sexes, where males are heavier than females of the same size (Hegele-Drywa et al. 2014). According to Turoboyski (1973), claw weight is also sexually dimorphic and may explain the difference in weight. Claw weight accounts for up to 64.0% of the male's total body weight, but only 11.1 to 28.0% of the female's total body weight (Turoboyski 1973).

Rhithropanopeus harrisii reproduce sexually by the transfer of a male spermatophore to the female spermatheca during copulation (Turoboyski 1973). Goy et al. (1985) reported that breeding is induced by elevated water temperatures, rather than diurnal light cycle or day length. Reproductive season generally occurs from May through September, but depending on water temperature, may continue as late as December (Costlow et al. 1966, Turoboyski 1973). Populations of Harris mud crab in the Newport and Neuse Rivers are known to extend their reproductive season from mid-April to mid-October (Goy et al. 1985). Harris mud crab has been observed copulating at temperatures ranging from 14°C to 32°C, but the average temperature in which reproduction takes place is 25°C (Turoboyski 1973).

Unlike other crab species, *R. harrisii* do not molt before copulation. Females copulate during the intermolt after the carapace has hardened (Turoboyski 1973, Morgan et al. 1983). Three to four days following copulation, females burrow into the bottom substrate to facilitate attachment of the eggs to the abdomen (Turoboyski 1973). Female Harris mud crabs lay between 1,000 and 7,500 eggs in up to four clutches per breeding season (Morgan et al. 1983). The number of eggs produced depends on the size of the female (Turoboyski 1973). The eggs are initially a greenish-black color that fades to clear with a black spot one to three days before hatching (Rosenberg & Costlow 1979). After

egg laying, the female seeks shelter under shells or sand. The female cares for the developing eggs by pumping oxygen-rich water across them using her abdomen (Turoboyski 1973).

Fifteen to nineteen days following fertilization, *R. harrisii* eggs hatch as pelagic larvae (Hood 1962). *R. harrisii* inhabiting tidal estuaries release larvae during high tide, while *R. harrisii* in nontidal estuaries release larvae in a 2-hour interval following sunset. Phenotypic flexibility has been observed in studies where ovigerous females were transplanted from nontidal to tidal conditions and vice versa. In these experiments, the timing of larval release changed to that of crabs in the new condition (Forward 2009). This is because larval release in *R. harrisii* is exogenously controlled by the embryos (Forward & Lohmann 1983). During release, the embryos emit a peptide hormone that induces abdomen pumping by females (Forward 2009, Forward & Lohmann 1983).

Pelagic larvae then proceed through four zoeal stages (zoea I, zoea II, zoea III, zoea IV) (Hood 1962). *R. harrisii* larvae have one long dorsal and rostral spine and a pair of antennal spines to deter predation (Morgan 1990). Despite being planktonic, the larvae exhibit depth regulation in the water column by floating or sinking to avoid predation and adverse conditions (Forward 2009). Larvae can detect changes in temperature, salinity, hydrostatic pressure, and light intensity (Forward 2009). For example, *R. harrisii* larvae are found higher in the water column during the night and lower during the day (Forward 2009). Chamberlain (1962) determined zoeae are in the highest concentration at depths between 0.5 m and 2.0 m during the day and from 2.0 m to the surface at night. This pattern of nocturnal diel vertical migration is thought to be a predator avoidance mechanism (Forward 2009). An additional method of vertical migration is common

among *R. harrisii* released in estuaries with semidiurnal tides. The larvae ascend during flood tides and descend during ebb tides to maintain a horizontal position in the estuaries (Forward 2009). Larvae vertically migrate to depths where net tidal flow is zero, allowing for retention and recruitment in lower salinity areas of the estuary (Forward 2009).

In addition to retention and recruitment benefits, vertical migration plays a major role in the survival of *R. harrisii* larvae. Costlow et al. (1966) found that survival from zoeal stages to megalops stages is largely affected by salinity and temperature. As salinity increase in mortality occurs when salinity increases (>15‰) even when temperatures remain high (>33°C) (Costlow et al. 1966). Larvae that survive development in high salinity (20-35‰) show abnormalities in laboratory studies (Rosenberg & Costlow 1979). Therefore, the larvae's ability to detect and maintain position in optimal environmental conditions is crucial to the success and survival of *R. harrisii*.

Following the zoea stages, Harris mud crab larvae transform to megalopae over the course of ten days (Morgan et al. 1983). Megalopae lose their dorsal and lateral spines, and the rostral spine is reduced to a bent projection between the eyes (Hood 1962). *R. harrisii* megalops settle out of the water column and into a suitable habitat (Hood 1962). Megalopae have been collected from empty mussel shells and are assumed to inhabit submerged shells and vegetation (Chamberlain 1962). *R. harrisii* only pass through one post-larval megalops stage (Hood 1962).

The final phase of *R. harrisii*'s life cycle is the crab stage. *R. harrisii* crabs quickly mature to reproductive size of 4.5 to 5.5 mm by the fifth crab stage (Morgan et al. 1983). Juveniles molt every four to seven days increasing in 0.5 mm increments. At this rate, *R. harrisii* can reach sexually maturity three months after oviposition by their parent

(Morgan et al. 1983). Adults continue to grow and molt after sexual maturity is reached (Williams 1984). Molting frequency then decreases to one or two molts per breeding season (Turoboyski 1973). Despite the decrease in molting frequency, ecdysis does not stop (anecdysis) as it does in some crab species (Turoboyski 1973). Another distinct characteristic of *R. harrisii* is the variation in post-molt body growth between crabs of the same pre-molt size. Turoboyski (1973) found that crabs reached 11.5 mm after the second breeding season, 13.5 to 16.6 mm after the third, and 20.0 mm by the fourth breeding season. The largest crabs in the study (26.1 mm male) and (19.0 mm female) were assumed to be 5 years old (Turoboyski 1973).

Rhithropanopeus harrisii is an opportunistic species, occupying a diverse array of substrates including sand, gravel, and large stones, marsh plants, algae, self-made burrows in muddy bottoms, and hard bottoms exposed to heavy winds and waves (Fowler et al. 2013). Harris mud crab is often associated with oyster reefs and can inhabit nearly any submerged object at depths down to 37 m (Williams 1984). In its native range, adult Harris mud crabs are commonly found in plants and debris. In its non-native range, the crabs are more flexible and occur in vegetated, unvegetated, hard, and soft bottoms (Fowler et al. 2013). In any case, *R. harrisii* shows a strong preference for sheltered bottoms and avoids soft, exposed bottoms when possible (Nurkse et al. 2015). It is unknown why Harris mud crabs are still observed in these unsuitable habitats. One explanation is that individuals are forced out by competition. For example, high population density can result in increased competition within the species, pushing less fit individuals into unfavorable places (Nurkse et al. 2015). Another possibility is a lack of predation. In areas like the northern Baltic Sea, the abundance of *R. harrisii* is neither

controlled nor limited by predators. The lack of predation could allow Harris mud crabs to colonize all possible habitats, including those with little to no shelter (Nurkse et al. 2015). Lastly, *R. harrisii* may be found inhabiting soft, exposed bottoms during cooler months. The crabs take refuge from low temperatures by migrating from the intertidal zone, where they are typically most abundant, to deeper water where the substrate is often bare, and the predation risk is high (Turoboyski 1973). Laboratory studies suggest that the crabs survive both predation and cold temperatures at these depths by burying themselves in the substrate. This provides protection and camouflage on the soft bottom while the crabs overwinter (Kinne & Rotthauwe 1952 cited in Turoboyski 1973). Harris mud crab's opportunistic nature and ability to survive in low quality habitats likely plays an important role in the distribution and spread of the species.

Harris mud crabs tolerate a wide range of stressful conditions including environmental and nutrient pollution (Glasby & Szefer 1998), salinities ranging from 0.006 to 40.0‰ (Costlow et al. 1966), subzero temperatures, and low dissolved oxygen (0.554 mg/L) (Turoboyski 1973). The crabs are facultative anaerobes and can utilize anaerobic glycolysis to survive more than 24 hours in anoxic conditions (Rychter 1997). Rychter (1997) found that during periods of freezing, *R. harrisii* show behavioral reactions to the decreased oxygen levels such as unburying, movement towards areas with more oxygen, raising the anterior part of the body, and gathering in groups. These physiological and behavioral adaptations to low oxygen levels allow Harris mud crab to survive in many types of aquatic environment.

Harris mud crabs are omnivorous and have been observed consuming zebra mussel (*Dreissena polymorpha*), ragworm (*Nereis diversicolor*), blue mussel (*Mytilus*

edulis), freshwater hydriod (*Cordylophora caspia*), blanket weed (*Cladophora sp.*), and algae (*Enteromorpha sp.*) (Turoboyski 1973). Studies on the diet of *R. harrisii* in Polish estuaries found that the gut contents contained 61.1% detritus, and 12.9% animal contents and fragments of copepods, insects, blue mussel (*Mytilus edulis*), and the invasive zebra mussel (*Dreissena polymorpha*) (Czerniejewski & Rybczyk 2008). However, the proportion of plants and animals in the crab's diet varies between habitats (Turoboyski 1973).

Four fish species are known to prey on Harris mud crab: *Ictalurus catus* (Heard 1975), *Urophycis regius* and *U. floridana* (Sikora et al. 1972), *Anguilla anguilla* (Turoboyski 1973). Heard (1975) found that *R. harrisii* makes up a significant part of the diet of *I. catus* in a Georgia estuary. Cannibalism during the molting cycle is also common with *R. harrisii* (Turoboyski 1973). In addition to predation, two species parasitize *R. harrisii*: *Loxothylacus panopaei*, a rhizocephalan barnacle (Grosholz & Ruiz 1995, Walker et al. 1992) and *Minchinia*, a haplosporidan protozoan (Marchand 1974). In estuaries, the population of *R. harrisii* is limited by the presence of *L. panopaei*. Female cyprids of *L. panopaei* settle on *R. harrisii* megalopae causing sterilization of both sexes (Walker et al. 1992, Ritchie & Hoeg 1981, Hoeg 1995). However, crab mortality does not occur in salinities less than 30‰ (Reisser & Forward 1991). *L. panopaei* larvae have low survival rates in salinities below 10‰ (Reisser & Forward 1991), giving *R. harrisii* a refuge from parasitism in low salinities (Forward 2009).

Rhithropanopeus harrisii is one of the most widely distributed brachyuran invaders worldwide (Grosholz & Ruiz 1996, Roche & Torchin 2007). *R. harrisii* is native to the Atlantic Ocean, ranging from the Miramichi Estuary, Canada, to Veracruz, Mexico

(Boyle Jr. et al. 2010). Established exotic populations were first observed in the Netherlands during 1936 (Williams 1984), quickly followed by San Francisco Bay, California in 1937 (Jones 1940). Today, *R. harrisi* has been introduced in over 22 countries, two oceans, ten seas, and ten freshwater reservoirs spanning four continents (Roche et al. 2009). *R. harrisi* has recently expanded to several US freshwater reservoirs in Texas, with populations now established in E.V. Spence, Lake Colorado City, Tradinghouse Creek Reservoir, Possum Kingdom Reservoir (Howells 1998), Lake Balmorhea, Squaw Creek Reservoir, Lake Granbury, Lake Whitney (Boyle Jr. et al. 2010), Hubbard Creek Reservoir (Huebner et al. 2021), and Lake Texoma (Patton et al. 2010). Currently, the crabs have been found in 82 locations (Fowler et al. 2013) at an introduced range of over 45° of latitude (Roche & Torchin 2007). The number of established populations and density of individuals within these populations are largely unexplored. In 2006, a study in the southern Baltic Sea found a total of 920 crabs in four years. The Gulf of Gdansk population of *R. harrisi* had densities exceeding 19 individuals/100 m², and were continuing to reproduce (Hegele-Drywa et al. 2014). Population densities in other locations, including Lake Texoma, is yet to be determined.

Rhithropanopeus harrisi is listed as an alien invasive in Poland and the United States (IUCN SSC Invasive Species Specialist Group 2008). Harris mud crab is currently among the top 30 species likely to invade Australia (Hayes & Silwa 2003). USFWS (2011) rank *R. harrisi*'s overall risk assessment category as "high" based on the crab's history of invasiveness, climate match, and potential for spreading disease. In addition, the Oklahoma Department of Wildlife Conservation recognizes *R. harrisi* as a potentially destructive exotic species in Oklahoma (ODWC 2021).

Eradication of *R. harrisii* has not been attempted, but initiatives by the Panama Canal Authority are underway (Roche et al. 2009). Physical control of *R. harrisii* through trapping has proven unsuccessful, as the crabs rarely enter traps (Petersen 2006). Biological control by fish predation and parasitic barnacles has been proposed, but researchers are concerned with potential effects to non-target species (Goddard et al. 2005). Laboratory studies using the pesticide Dimilin, a chitin inhibitor, as chemical control showed mixed results in larval mortality (Christiansen et al. 1978, Christiansen & Costlow 1980). However, Christiansen & Costlow (1980) found that Dimilin was effective in eradicating *R. harrisii* adults. The chemical works by interfering with chitin formation and is therefore lethal to many arthropod animals (Christiansen & Costlow 1980). Given that humans are the primary source of Harris mud crab introduction, public awareness and citizen science programs are considered the most effective strategy in preventing further expansion of *R. harrisii* (Lehtiniemi et al. 2020).

Rhithropanopeus harrisii can adapt to a wide range of conditions, making expansion a concern (Roche et al. 2009). Climate match with the contiguous United States is high in areas along the Atlantic, Gulf, and Pacific coasts (USFWS 2011). *R. harrisii* also has a high probability of establishment in the Great Lakes (Harriet et al. 2022) and Australia (Hayes & Silwa 2003). Accidental transport of *R. harrisii* by humans is considered the main vector of introduction (Cohen & Carlton 1995, Huebner et al. 2021). There are many mechanisms of introduction including: 1) marine fish stocking, i.e. striped bass (*Morone saxatilis*) and red drum (*Sciaenops ocellatus*), 2) release by anglers through live-wells and bait buckets, 3) transport through ship ballast water

(Howells 2001), 4) oyster shipping (Cohen & Carlton 1995), and 5) movement of the crabs via rivers (Boyle Jr. et al. 2010).

In areas where *R. harrisii* have been introduced, indigenous species, such as crayfishes and crabs may have been displaced (Richey 2004). Howells (1998) noted that *R. harrisii* might be negatively affecting the native bivalve community in Possum Kingdom, a Texas reservoir. If so, the removal of deposit and suspension feeding bivalves could impact biodeposition and nutrient cycling (Norkko et al. 2001). Harris mud crab also prey upon grazers (Silliman et al. 2004), thereby modifying algal growth (Jormalainen et al. 2016, Lokko et al. 2015). Jormalainen et al. (2016) documented reduced biodiversity of gastropods, small crustaceans, and chironomids following the introduction of *R. harrisii* in the Baltic Sea. Changes in the benthic community composition can impose trophic cascade and create competition with native species (Jormalainen et al. 2016). Overall, Harris mud crabs have potential to alter food webs and ecosystem functioning by acting as a predator or serving as prey to native species (Jormalainen et al. 2016).

Another impact of *R. harrisii* is the spread of crustacean diseases. *R. harrisii* can carry a herpes-like virus that is fatal to lobsters and shrimps (Shields & Behringer 2004). The virus is observed in the germinative cells of Harris mud crab, but it is not known if the virus causes morbidity or mortality in the crabs (Payen & Bonami 1979 cited in Shields & Behringer 2004). *R. harrisii* is also a carrier of an important crustacean virus, white spot syndrome virus (WSSV) (Payen & Bonami 1979 cited in Roche & Torchin 2007). While the pathological consequences of infection and transmission in Harris mud crabs have not been addressed, the viruses are known to be harmful to many other

crustacean species and should be of concern. *R. harrisii*'s opportunistic nature, history of invasion, impact on biodiversity, and potential for spreading disease all demonstrate the need to further evaluate this exotic species. Many areas of introduction, including Lake Texoma have not been well studied.

Lake Texoma was impounded in 1944 and is the 12th largest US Army Corps of Engineer's lake, with an area of 360.27 km² and a water volume of 3.12 km³. Lake level ranges from 615 to 619 ft MSL and fluctuates 5-8ft annually, and the maximum depth is 100 ft. Clarity is moderate to clear (TPWD). Aquatic vegetation is not abundant, but stands of water willow, American lotus, floating heart, and bushy pondweed are present. Lake Texoma has 580 miles of shoreline, with approximately 9 miles of rip-rap and 50 miles of standing timber (TPWD). The remaining shoreline is composed of cut banks, sandy beaches, rocky shorelines, and bluffs. Predominant fish species include blue and channel catfish, various bass, black and white crappie, and bluegill. Blue-green algae blooms occur occasionally throughout the lake (TPWD).

Primary inflow into Lake Texoma is the Red River from the west (daily mean flow of 2,571 ft³/s from 1938-1998) and Washita River from the north (daily mean discharge of 2,692 ft³/s in 1998) (USGS). Lake Texoma drains in the Red River from the Denison Dam on the Oklahoma-Texas border (33.8947°N, 96.6745°W). The Red River flows through 250 million year old salt beds in Oklahoma and Texas, leaching up to 3,450 tons of sodium chloride into the river per day (Malewitz 2013). Salinity generally decreases in the downstream direction, with a specific conductance of 3,740 µS/cm above Lake Texoma and 1,795 µS/cm at the outflow of Denison Dam (USGS).

In 2008, the Oklahoma Department of Wildlife Conservation received the furthest inland report of Harris mud crab from Lake Texoma (Patton et al. 2010). Patton et al. (2010) confirmed the report by collecting a total of 24 crabs from various sites along Lake Texoma. In 2011, Huebner et al. (2021) collected 45 specimens for genetic analyses and determined the founding individuals were most likely from Texas estuaries. To date, only two studies have been conducted on this population. The following project will describe several aspects of the Lake Texoma population of Harris mud crab for the first time. Thus, the objectives of this study are to 1) document the current distribution, 2) estimate population size, 3) record sex and individual measurements, 4) determine reproductive periods, and 5) note microhabitat preferences and any other pertinent ecological information regarding Harris mud crab in Lake Texoma.

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MORPHOMETRIC ANALYSIS OF HARRIS MUD CRAB (*RHITHROpanopeus*
HARRISII) IN LAKE TEXOMA

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ABSTRACT

Harris mud crab, *Rhithropanopeus harrisi*, is a small mud crab native to the brackish waters of the Atlantic coast of North America. Today, *R. harrisi* exists well beyond its native range and in a wide variety of habitats, including a freshwater reservoir, Lake Texoma. *R. harrisi* was discovered in Lake Texoma in 2008 and is thought to have originated from Texas estuaries. Besides these two findings, there have been no comprehensive studies conducted on the Lake Texoma population of Harris mud crab. The objectives of this study were to gather and describe the morphometrics of *R. harrisi* from Lake Texoma and document sex ratio, carapace size distributions, and handedness. Individuals were collected from August 2019 to August 2021 from six sampling sites located along the Oklahoma side of Lake Texoma. Various morphometrics were recorded from 1,326 crabs. Vast majority of crabs in the study were right-handed. The crabs from Lake Texoma were smaller than crabs reported from other locations. Small size could be the results of stressful conditions or early fatality. While there was no significant difference in average carapace size between males and females, males made up the highest percentage of large size classes. Males were also more numerous in the population and often attained larger claw sizes than the females. This is thought to be beneficial in intraspecific competition for females.

Keywords: Decapoda, Crustacea, invasive species

INTRODUCTION

Harris mud crab, *Rhithropanopeus harrisi*, is a small decapod crustacean belonging to the family Panopeidae (formally Xanthidae) (Marco-Herrero et al. 2014). Harris mud crabs possess a short abdomen hidden under the thorax and four pairs of walking legs (Ryan 1956). The chelipeds are often curved and unequal (Hegele-Drywa et al. 2014). *R. harrisi* are distinguished by a subquadrate carapace and four pairs of anterolateral teeth (Ryan 1956, Turoboyski 1973).

Harris mud crabs originate from the Atlantic coast of North America, ranging from Miramichi Estuary, Canada, to Veracruz, Mexico (Boyle Jr. et al. 2010). Today, *R. harrisi* occurs far beyond its native range, and is described as one of the most widely distributed brachyuran invaders (Grosholz & Ruiz 1996, Roche & Torchin 2007). The crabs are found in 82 locations worldwide (Fowler et al. 2013), including several US reservoirs throughout Texas and Oklahoma (Boyle Jr. et al. 2010, Patton et al. 2010).

In 2008, Patton et al. (2010) collected 24 crabs from Lake Texoma and documented the furthest inland occurrence of Harris mud crabs to date. Virtually no research was conducted on the Texoma population until Huebner et al. (2021) performed genetic analyses and determined the founding individuals were most likely from Texas estuaries. The purpose of the following project is to describe the morphometrics of Harris mud crabs from Lake Texoma.

MATERIALS AND METHODS

R. harrisii specimens were collected monthly during the warm season and every other month during the cool season. Sampling occurred from August 2019 to August 2021. Six sites were established on the Oklahoma side of Lake Texoma. At each site, two 1m² plots were randomly selected within a submerged transect along the shoreline. A 13.5 cm by 18.0 cm scoop was used to dredge the entire benthic area within the plots. Visual surveys were conducted in addition to dredging if fewer than 10 crabs were found in the plots. Specimens were preserved in 70% ethanol and returned to the laboratory at the University of Central Oklahoma. Water temperature, salinity, and specimen count from each site were recorded.

A stereo microscope was used to sex and perform morphometric analyses. The following measurements to the nearest 0.01 mm were taken using a micrometer: carapace length (CL), from between eyes to the posterior margin of the carapace; carapace width (CW), greatest distance across the carapace; claw lengths (LCL, RCL), including the dactyl and propodus; and claw widths (LCW, RCW), left and right respectively. The data obtained was tested for normality using the Shapiro-Wilk test and then subjected to either the appropriate chi-square or Mann-Whitney tests.

RESULTS AND DISCUSSION

A total of 1,326 crabs were collected in 18 sampling trips. Of the crabs analyzed, 420 (31.7%) were female, 524 (39.5%) were male, 341 (25.7%) were immature, and 41 (3.1%) were too damaged to determine sex. Results from a two-proportion z-test indicated that the number of males and females differed from an expected 1:1

(male:female) ratio ($p < 0.001$). Male-dominated sex ratios have been observed in other population of Harris mud crab, including a 1.3:1 in the Dead Vistula (Normant et al. 2004) and up to 2.4:1 in Vistula Lagoon (Rychter 1999 as cited in Normant et al. 2004).

The range of carapace width was larger in males than in females. The largest male measured 17.85 mm wide, while the largest female was 15.6 mm (Table 1). Although *R. harrisii* are sexually dimorphic and males usually attain larger sizes (Czerniejewski & Rybczyk 2008, Hegele-Drywa et al. 2014), there was no significant difference between the mean size of males and females according to a Mann-Whitney U Test ($U = 111,722$, $p = 0.4455$). Average carapace widths were also similar between the sexes when confidence intervals were compared (Fig. 2). To analyze size distribution of males and females, the individual crabs were assigned to 1 mm-wide carapace size classes and compared using chi-square tests. The test results showed multiple size classes with an unequal sex ratio of males and females. The following carapace width (CW) size classes differed significantly from expected (1:1): 6.00-6.99mm CW ($\chi^2 = 6.20$, $df = 1$, $p = 0.0128$), 10.00-10.99mm CW ($\chi^2 = 5.26$, $df = 1$, $p = 0.0218$), 11.00-11.99mm CW ($\chi^2 = 6.53$, $df = 1$, $p = 0.0106$), 12.00-12.99mm CW ($\chi^2 = 9.00$, $df = 1$, $p = 0.0028$), and 13.00-13.99mm CW ($\chi^2 = 7.14$, $df = 1$, $p = 0.070546$) (Fig. 1). All size classes with disproportionate sex ratios were skewed towards male. Males also made up the majority of several large size classes (>10.00 mm) (Fig. 1). As stated earlier, it is common in brachyuran crabs for males to reach larger sizes, and the trend has been documented in *R. harrisii* from Poland (Czerniejewski & Rybczyk 2008). However, there was a notable difference in overall carapace size between the crabs from Lake Texoma and the European crabs. The Lake Texoma crabs were smaller, averaging 12mm narrower than

the Polish crabs. Additionally, *R. harrisii* in other locations are often larger than the maximum size (17.85 mm) observed in Lake Texoma (Turoboyski 1973, Normant et al. 2004, Czerniejewski & Rybczyk 2008). For example, Ryan (1956) reported a crab as large as 26.1mm, and Turoboyski (1973) determined the maximum size for the species is 27 mm.

A possible explanation for the reduced size is the stressful conditions in Lake Texoma. Lake Texoma is a freshwater reservoir with low salinity (<1 PPT) and wide-ranging seasonal changes in water temperature (9-35 °C). Given that Harris mud crab is native to brackish, coastal waters, these conditions in Lake Texoma likely hinder the growth and development of Harris mud crab. Another factor to consider is fatality. Without knowing the age of the crabs, it is difficult to determine whether the crabs are growing slower than expected or dying before a larger body size is reached. For example, lake level is a distinct, fluctuating characteristic of a reservoir that can affect the survival of Harris mud crab. Two massive fatality events were witnessed as a result of rapidly dropping lake levels. Hundreds of crabs were estimated to be stranded and desiccated on the shoreline at the sampling sites. Fatality events likely occur more often than observed and can affect the number of crabs that survive multiple years and attain a larger size.

Results from a chi-square test show an unequal distribution of claw length ($\chi^2 = 1329.65$, $df = 2$, $p < 0.001$). Heterochely was observed in male, female, and immature crabs (Fig. 3). Approximately 86.73% of crabs were right-handed, 11.02% were left-handed, and 2.24% of crabs were homochelous. The results are consistent with the literature stating Harris mud crabs are right-handed (Hegele-Drywa et al. 2014). When a Mann-Whitney U test was used to compare the dominant claws of adult male and female

crabs (>4.0mm), claw lengths differed significantly ($U=61605$, $p<0.001$). Despite majority of crabs having a dominant right claw, the largest claw was a male's left claw measuring 14.7mm long (Table 1). However, the measurement was an outlier far beyond the upper quartile range (Fig. 4). Figure 4 illustrates the means, medians, and ranges of left and right claw lengths in each of the sexes. Lastly, a positive, linear relationship between major chela length (mm) and carapace width (mm) was observed in males, females, and immature crabs (Fig. 5). Males displayed a higher rate of change as major chela length (mm) and carapace width (mm) increased (Fig. 5). This could be because larger claws are advantageous for males in intraspecific competition for females (Jesse 2001, Czerniejewski & Rybczyk 2008).

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Table 1. Mean carapace width, carapace length, and major chela length of the 524 male and 420 female *Rhithropanopeus harrisii* adults from Lake Texoma, Oklahoma.

	Carapace width (mm)		Carapace length (mm)		Major chela length (mm)	
	Range	Mean \pm std	Range	Mean \pm std	Range	Mean \pm std
Males (524)	4.00 - 17.85	7.51 \pm 2.60	3.00 - 12.6	5.71 \pm 1.90	1.65 - 14.70	5.49 \pm 2.44
Females (420)	4.00 - 15.60	7.24 \pm 2.16	3.15 - 11.65	5.48 \pm 1.53	1.65 - 10.15	4.61 \pm 1.47

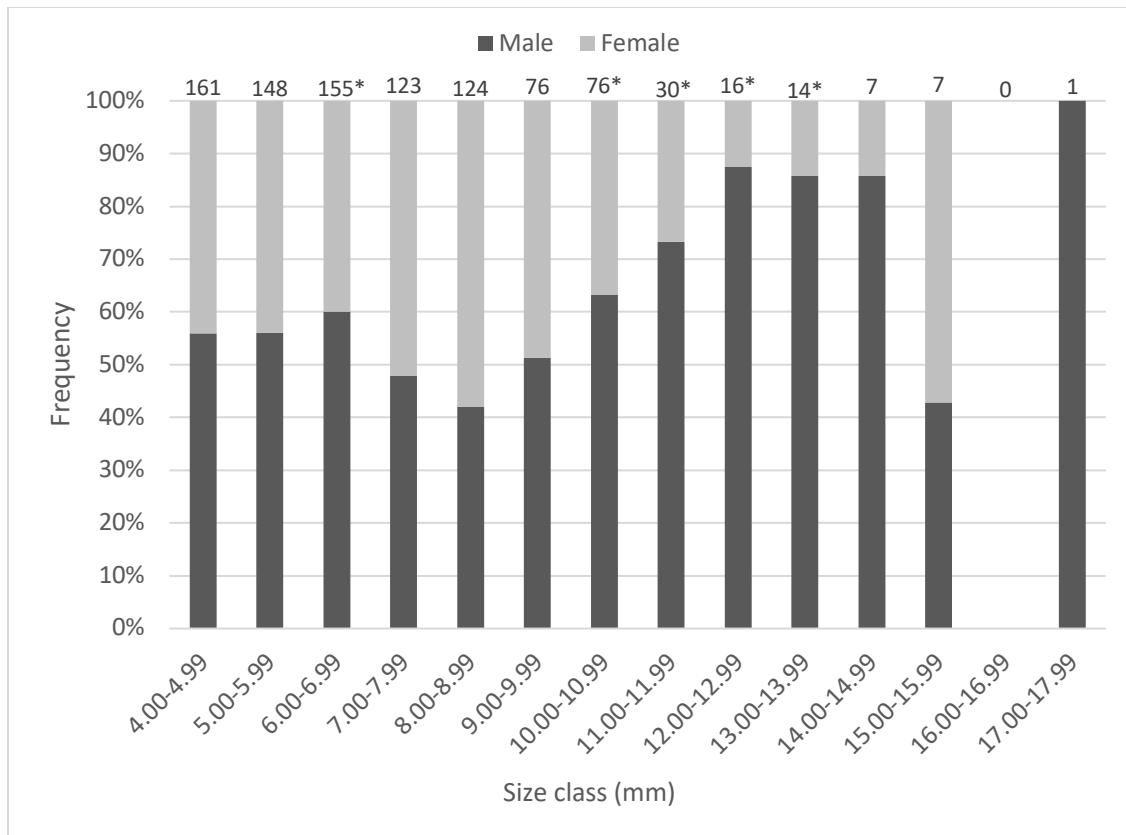


Figure 1. Sex ratio of *R. harrisii* adult male and females by carapace width (mm) size class, sampled from August 2019 to August 2021 from Lake Texoma, Oklahoma. Crabs larger than 4.0mm are considered adults. The sample size is denoted at the top of each class and an asterisk (*) indicates statistical difference from the expected 1:1 (male:female) sex ratio in each size class. Size classes with fewer than 2 observations were omitted from statistical analyses due to small sample sizes.

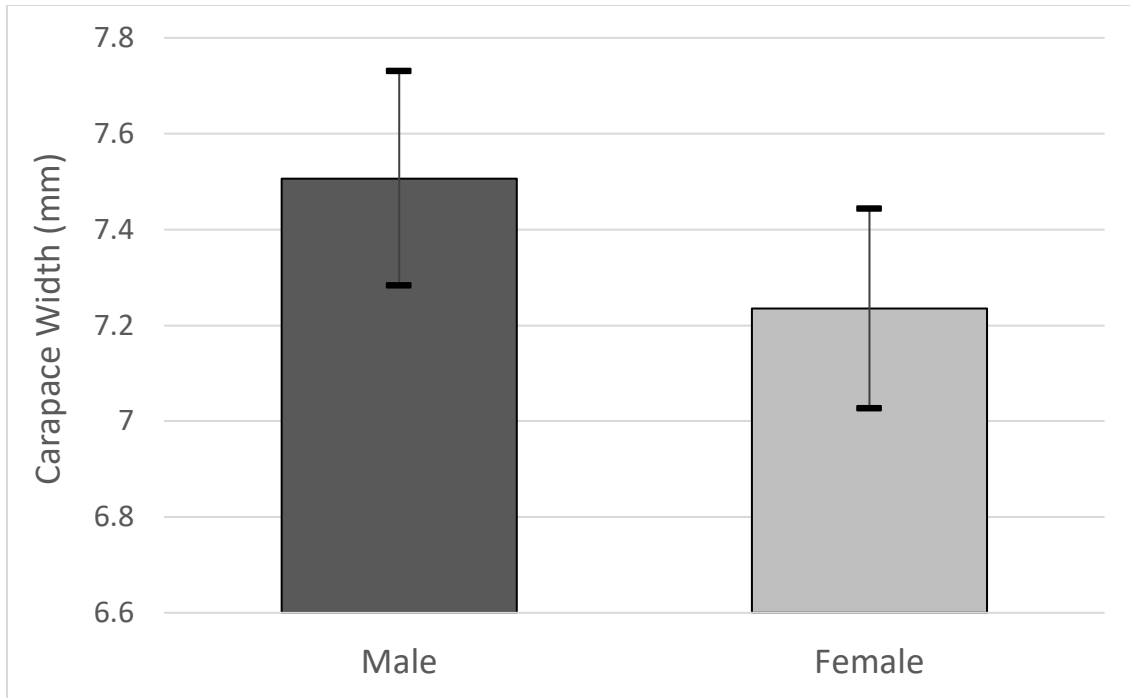


Figure 2. Carapace width (mm) averages for adult male and female *R. harrisii* crabs collected throughout the entire sampling period. Error bars display 95% confidence intervals.

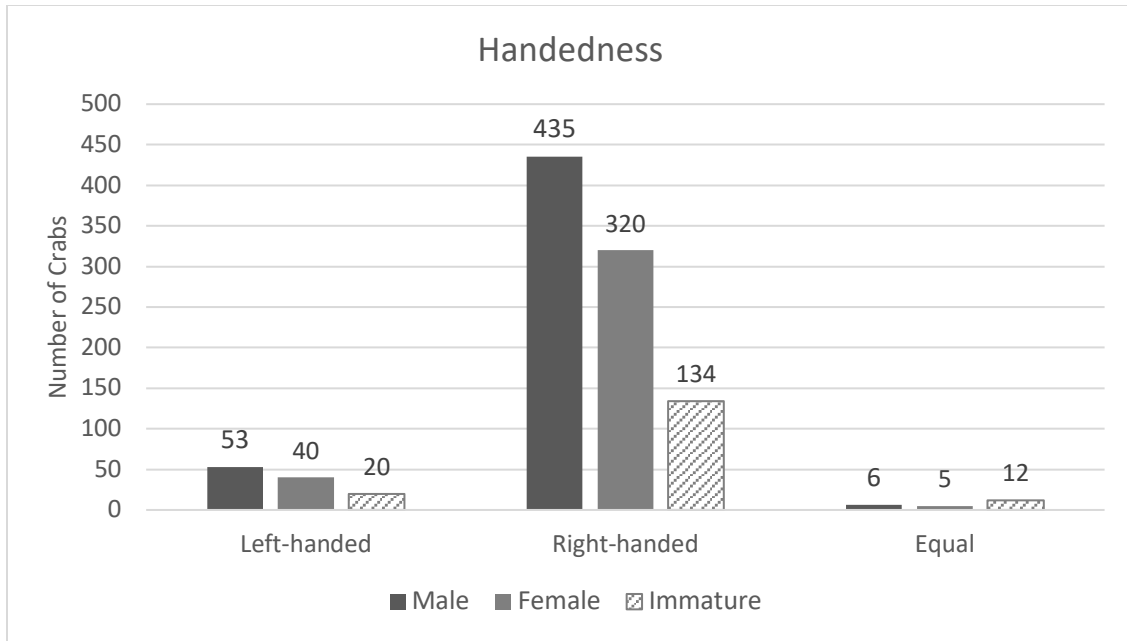


Figure 3. Bar graph showing the number of male, female, and immature *R. harrisi* crabs displaying dominant-right, dominant-left, or equally-sized claws.

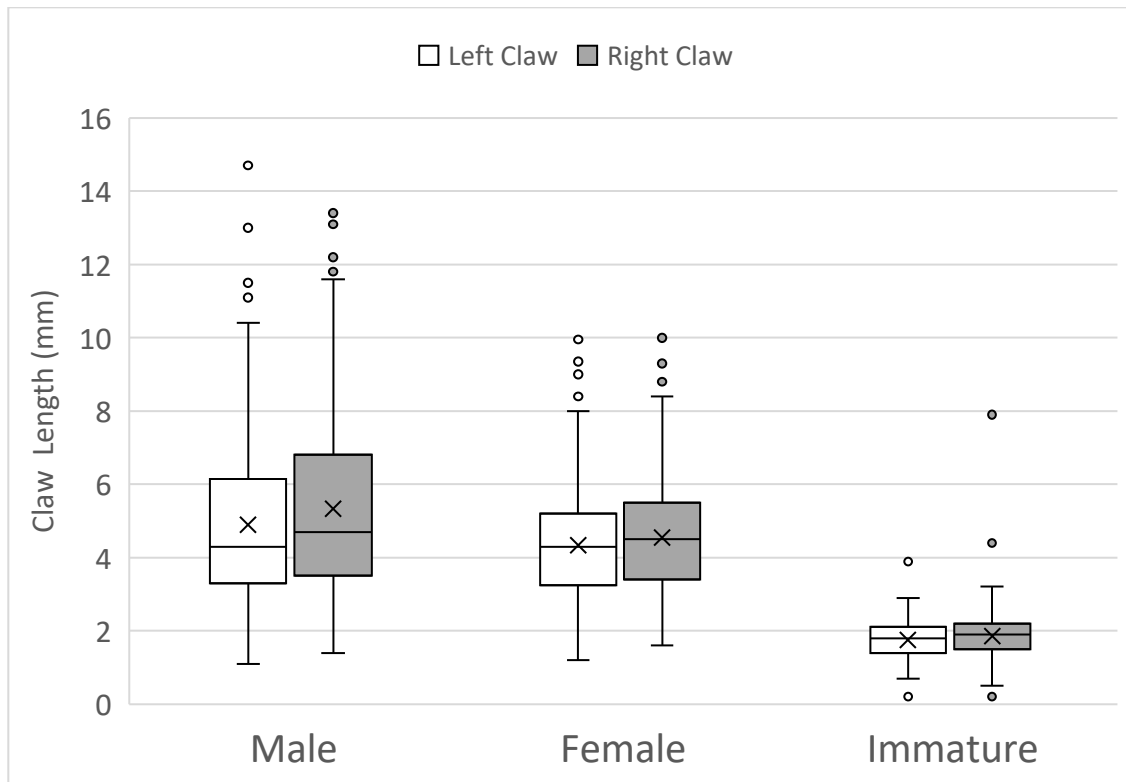


Figure 4. Left and Right claw length (mm) ranges for *R. harrisii* male, female, and immature crabs collected from Lake Texoma, Oklahoma throughout the 2019-2021 sampling period. Bars indicate the five-number summary of the data including the minimum, first quartile, median, third quartile, and maximum. Means are represented with an “x.”



Figure 5. Carapace width (mm) versus major chela length (mm) for male, female, and immature *R. harrisii* crabs collected from Lake Texoma, Oklahoma during the 2019-2021 sampling period.

ECOLOGY OF HARRIS MUD CRAB (*RHITHROPANOPEUS HARRISII*)
IN LAKE TEXOMA

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ABSTRACT

Harris mud crab, *Rhithropanopeus harrisi*, and its distribution was first reported in Lake Texoma in 2008. Since that time, very little research regarding this population has been conducted. Goals of the study included determining reproductive periods, note microhabitat preferences, and document the distribution of crabs in Lake Texoma over a decade after their initial discovery. Six sampling sites were established on the Oklahoma side of Lake Texoma along a transect from the OU Biological Station to near the Denison Dam. Sites were sampled from August 2019 to August 2021. A total of 1,396 crabs were observed with 1,326 collected for analyses. Results indicated a significantly male-dominated sex ratio in the population. Abundance and distribution of crabs varied across the lake, likely due to salinity values and microhabitat availability of each site. Population densities in Lake Texoma were higher than those observed in other locations. Seasonal trends noted the difference in crab frequency during the warm and cool seasons. A rapid drop in lake level during late winter of 2020 confirmed that the crabs migrate to deeper water to take refuge from the cold temperatures. The presence of larvae and gravid females suggests a reproductive period from July to October and confirms the successful establishment of Harris mud crab in Lake Texoma.

Keywords: Decapoda, Crustacea, invasive species

INTRODUCTION

Rhithropanopeus harrisi is a small decapod crustacean commonly known as the Harris mud crab. *R. harrisi* is native to the Atlantic coast, ranging from Miramichi Estuary, Canada to Veracruz, Mexico (Boyle Jr. et al. 2010). Today, *R. harrisi* is one of the most widely distributed brachyuran species worldwide (Grosholz & Ruiz 1996, Roche & Torchin 2007). *R. harrisi* has been introduced in over 22 countries, two oceans, ten seas, and several US freshwater reservoirs in Texas (Boyle Jr. et al. 2010).

In 2008, Patton et al. (2010) confirmed the furthest inland report of Harris mud crab to date from Lake Texoma. Lake Texoma is a 360.27 km² freshwater reservoir located on the Oklahoma-Texas border. Boating and fishing are popular sports on Lake Texoma and are thought to be the source of invasive species introduction. Historically, Harris mud crabs have been introduced by anglers through live-wells and bait buckets, transported through ship ballast water, and released during marine fish stocking of striped bass (*Morone saxatilis*) and red drum (*Sciaenops ocellatus*) (Boyle et al. 2010). According to genetic analyses, the founding individuals likely originated from Texas estuaries (Huebner et al. 2021) and could have been introduced to Lake Texoma through any of these human-initiated methods (Boyle et al. 2010).

The Oklahoma Department of Wildlife Conservation (ODWC) recognizes the Harris mud crab as a potentially destructive species due to its documented impacts including pipe fouling, economic loss, displacement of native species (i.e. crayfish and

midges), and spread of disease (Payen & Bonami 1979 cited in Roche & Torchin 2007). Currently, only two studies have been conducted on the Lake Texoma population. This study describes several ecological aspects of the Lake Texoma population of Harris mud crab for the first time.

MATERIALS AND METHODS

Based on preliminary studies, six collection sites were established along the Oklahoma side of Lake Texoma. Locations of these sites listed from upstream to downstream are 1) OU Biological Station, 2) Lark Sandy Beach, 3) Caney Creek Yacht Club, 4) Texoma State Park, 5) Willow Springs Marina, and 6) West Burns Run Campground (Fig. 1). Sites were sampled monthly during the warm season and every other month during the cool season, with the exception of site #6 which was not accessible from October 2019 to April 2020. Sampling occurred from August 2019 to August 2021.

At each site, a 13.5 cm x 18.0 cm scoop was used to dredge two 1m² plots of submerged shoreline sediments. The entire benthic sample of the plots was transferred into 0.5 mm sieve buckets and sorted. Harris mud crabs were then separated from the sample and counted. Searching for crabs outside the plots was conducted if fewer than 10 crabs were found in the plots. Specimens were preserved in 70% ethanol and returned to the laboratory at the University of Central Oklahoma. Water temperature, salinity, specimen counts, and general observations from each site were recorded. A dissection microscope was used to determine the sex of each crab. A two-proportion z-test was used to analyze the data and calculate sex ratio.

A plankton net was used to sample Harris mud crab larvae during darkness. Ten tows of approximately 10 m in length were performed two to three hours after sunset. The samples were preserved in 70% ethanol and returned to the laboratory. Examination with a dissection microscope confirmed the presence or absence of zoea larvae during each sampling period. Larval presence-absence data and the collection of gravid females were used to determine reproductive period of Harris mud crab in Lake Texoma.

RESULTS AND DISCUSSION

Sex ratio

A total of 1,396 crabs were collected in 18 sampling trips. Of the 1,326 crabs analyzed, 420 (31.7% were female, 524 (39.5%) were male, 341 (25.7%) were immature, and 41 (3.1%) were too damaged to determine sex. Results from a two-proportion z-test indicated that the number of males and females differed from an expected 1:1 (male:female) ratio, favoring males ($p < 0.001$). Male dominated sex ratios have been observed in other populations of Harris mud crab, including a 1.3:1 in the Dead Vistula River (Normant et al. 2004) and 2.4:1 in Vistula Lagoon (Rychter 1999 as cited in Normant et al. 2004).

One explanation for a male-dominated population is competition for limited space or resources. For instance, the crab's preferred microhabitat of gravel was a limited resource at several of the sampling sites in Lake Texoma. The abundance of microhabitat also fluctuated depending on lake level and the addition/removal of inhabitable debris on the shoreline (i.e. burlap, trash, recreational equipment). It is possible that with limited space, the larger males outcompeted smaller females. Additionally, males are more motile and better able to obtain food, which is advantageous when resources are scarce

(Czerniejewski 2009). However, based on the crab's opportunistic nature, food is perhaps the least probable reason for a male-dominated population in Lake Texoma.

Another explanation for unequal sex ratio is sampling methods. Normant et al. (2004) states that sex ratios are largely dependent on the technique used to capture the crabs. For example, Normant et al. (2004) and Janta (1996) reported opposite sex ratios from the same area, and determined the results were likely due to a difference in sampling methodology. In similar studies, Krzywosz et al. (1995) concluded that the number of males is a characteristic feature of the collection method when sampling other decapod crustaceans such as crayfish (cited in Normant et al. 2004). Method-dependent sex ratios are expected because males are more mobile, especially in warmer months. The sampling methods used in this study were most similar to those employed by Janta (1996), which yielded a sex ratio skewed towards female. Therefore, it is reasonable to assume this study was equally effective at capturing males and females.

Lastly, Tesch (1913) found that the sex ratio of *R. harrisii* favored males as the salinity of the water decreased (as cited in Turoboyski 1973). This concept seems to apply to the low salinity conditions of Lake Texoma, so it may partly explain the higher proportion of males.

Site Trends

The number of crabs varied greatly by site. Figures 2 through 6 illustrate the relative abundance of crabs at each site and the frequency of male, female, and immature crabs in each collection. Sites #2 and #3 accounted for more than half of the total crabs

collected 95% CI (391.3, 473.7) and 95% CI (414.1, 498.8), respectively (Fig. 2, Fig. 4-5). Site #5 had the fewest number of crabs during the sampling period (2.9%) (Fig.2, Fig. 7). One explanation for this distribution is the range in salinity. The Red River flows through 250-million-year-old salt beds in western Oklahoma and Texas, leaching up to 3,450 tons of sodium chloride per day (Malewitz 2013). Salinity in Lake Texoma generally decreases in the downstream direction and is highest near site #1 and lowest at site #6 (Fig. 1). Additionally, the Washita River inputs freshwater between sites #4 and #5 in the north-east (Fig. 1). Because these crabs are a marine species, it is possible that their distribution is influenced by the salinity gradient, resulting in a higher number of crabs in the west and fewer in the east (Fig. 2-8).

Another explanation could be habitat availability. Results from an independent study using a limited number of crabs, indicate that 94% of Harris mud crabs from Lake Texoma select gravel as a microhabitat over vegetation and sediments. This was reflected by results from the primary study. For example, site #4 was primarily clay substrate, while site #5 was sand. Neither site offered the cover or protection that the crabs require (Nurkse et al. 2015), possibly explaining the lower numbers usually occurring at those sites. Sites #3 and #6 had rocky shorelines that made suitable habitats for Harris mud crab resulting in higher densities of crabs. Sites #1 and #2 had rocks that were submerged only during periods of higher lake levels. Low lake levels left the gravel exposed, and the submerged portion of the sampling areas were mostly sand and mud. Figure 4 illustrates the majority of the crabs collected at site #2 were from one sample when the lake level was elevated. The same site had considerably fewer crabs the rest of the sampling period. This resulted in site #2 appearing to have a higher population than actually survived (Fig.

2, Fig. 4). Overall, the data suggests that it is most likely a combination of salinity and microhabitat availability affecting the distribution pattern of Harris mud crab in Lake Texoma.

Seasonal trends

The greatest number of crabs (523) were observed on July 17, 2020. Crabs were most abundant when water temperatures were above 30°C (Fig. 9). That is likely due to the crab's increased locomotor activity during the warm season. Crabs are ectotherms and experience an increased demand for food as their metabolism responds to warming temperatures (Mat et al. 2017). Additionally, elevated water temperatures induce breeding activity in Harris mud crabs. This not only means the crabs were more likely to be captured in samples because they are active and searching for mates, but the population totals also included the addition of new juveniles. During this time, large numbers of juveniles may be present in the population, but only a small percentage survive long-term (Gothland et al. 2014). Figure 9 reflects this concept in the number of crabs collected over time. On July 17, 2020 there was a peak in the number of crabs collected (488), and of those crabs, 41.5% (212) were juveniles (carapace width <4.0mm). The following months showed a sharp decrease in the population as the crabs were either consumed by predators or outcompeted for limited resources and/or space, a pattern typical of crabs and other r-selected species (Gothland et al. 2014).

Alternatively, very few crabs were observed during periods of cool water temperature (Fig. 9). No crabs were collected in 6 of the 18 sampling periods, when water

temperatures were below 23°C (Fig. 9). The disappearance of crabs from the sampling plots may be justified by seasonal migration. Turoboyski (1973) suggests that Harris mud crabs migrate to deeper water during the cool months to take refuge from the cold intertidal conditions. To date, there are no studies describing this behavior in reservoir populations. However, seasonal migration was verified February 2021 when crabs were found despite the water temperatures being below 23°C (Fig. 9). Leading up to the February collection, the lake level dropped to 614 ft, which shifted the sampling area further into the lakebed (Fig. 10). The crabs remained in place from their earlier seasonal migration and 40 individuals were found. Crabs were found in the samples until the lake level rose again in April 2021 (Fig. 9-10). This confirms that Harris mud crabs migrate to deeper water in Lake Texoma during the cool months.

The population trends for Harris mud crab in Lake Texoma are best described as seasonal. The number of crabs present in the shoreline habitat is largely dependent on the water temperature and lake level. Additional studies are needed to accurately assess the frequency and distribution of crabs in the deeper water during the cool months.

Population density

The overall densities of Harris mud crab ranged from 0 individuals/m² to 186 individuals/m² (Table 1). The lowest average population density was observed at site #5 (2.00 individuals/m² ± 1.00, \bar{x} ± s.d.) and the highest was at site #2 (87.5 individuals/m² ± 85.92) when crabs were present. The average density observed from all sites was 23.4 individuals/m² (± 38.62) when crabs were present. Population densities of crabs in Lake

Texoma surpass the densities reported from other locations. Hegele-Drywa et al. (2014) reported 19 individuals/100m² in the Gulf of Gdansk. Despite high crab densities in several of the quadrats in this Lake Texoma population, crabs were absent in 159 (73.6%) of the 216 total collections. This data represents an extremely patchy distribution. To avoid overestimating the population densities, quadrats were randomly selected rather than intentionally sampled where crabs would most likely occur. This often meant that few or no crabs were found in the plots, even if crabs were present elsewhere. Also, it should be noted that the population densities for the cooler months are most likely underestimated. Additional studies are needed to gather population data during the crab's seasonal migration to deeper water.

Reproductive Periods

Harris mud crab larvae were found in plankton tows from July through October 2020 and in June and July 2021 (Table 2). Larvae were present at temperatures above 20.3°C, but not below. The larvae data is consistent with the spike in juvenile crabs found in July 2020. Furthermore, twelve gravid females were collected in four samples from: October 2019, August 2020, September 2020, and August 2021 (Table 2). Based on these results, the reproductive period for Harris mud crab in Lake Texoma is likely June through October.

The presence of larvae and gravid females confirms Harris mud crab is established and reproducing in Lake Texoma. However, prior studies found that the larvae could not hatch in salinities less than 5.0‰ (Costlow et al. 1966) and physiological

problems occurred in adults exposed to freshwater for extended time (Turoboyski 1973). The salinity of Lake Texoma consistently ranged from <1‰ to 1‰ during the study, suggesting the population of crabs are adapted to freshwater conditions. This is a concern because Harris mud crabs from Lake Texoma exhibit potential to spread and colonize a greater range of habitats across North America.

Summary and Conclusion

The abundance of Harris mud crabs in Lake Texoma (1,396) was considerably higher than the previous observations in 2008 by Patton et al. (2010). Since that time, Harris mud crabs have multiplied and spread to all available areas of the lake and now exist at densities of up to 186 individuals/m². Salinity and microhabitat availability appear to be the predominant factors dictating the distribution and abundance of crabs at each site. Seasonal trends were observed, most notably a large increase in the population as water temperature rises at the beginning of breeding season and a disappearance of crabs during the cool months. A rapid drop in lake level confirmed that the crabs migrate to deeper water to take refuge from cold temperatures. The presence of Harris mud crab larvae and gravid females indicate a reproductive season from June to October in Lake Texoma. All life stages of Harris mud crab are thriving despite Lake Texoma's low salinity, and salinity tolerance should raise concern for other areas susceptible to invasion. Future studies are needed to assess the ecological consequences, if any, of Harris mud crab in Lake Texoma. The crabs are known to cause economic loss (Zaitsev & Ozturk 2001), a decrease in biodiversity (Jormalainen et al. 2016), and the displacement of native species like crayfish in other areas of introduction (Richey 2004).

Additional studies would benefit the current and potential areas of invasion, as well as provide a better understanding of Harris mud crab.

ACKNOWLEDGEMENTS

We thank the University of Central Oklahoma and the Research, Creative, and Scholarly Activities (RCSA) grant program for supplies and travel support. We also thank the University of Oklahoma Biological Station, U.S. Army Corps of Engineers, and Texoma State Park for allowing access and permission to collect.

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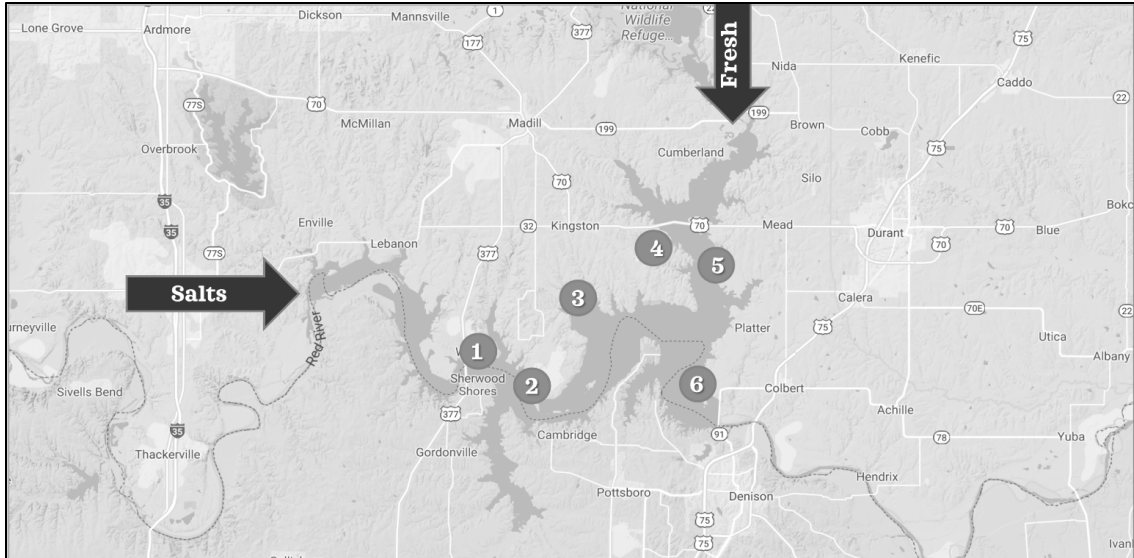


Figure 1. Map showing the Red River, Oklahoma-Texas border, and Lake Texoma. Study sites are 1) OU Biological Station, 2) Lark Sandy Beach, 3) Caney Creek Yacht Club, 4) Texoma State Park, 5) Willow Springs Marina, and 6) West Burns Run Campground. Arrows indicate the direction of flow and input of salts by the Red River and freshwater by the Washita River.

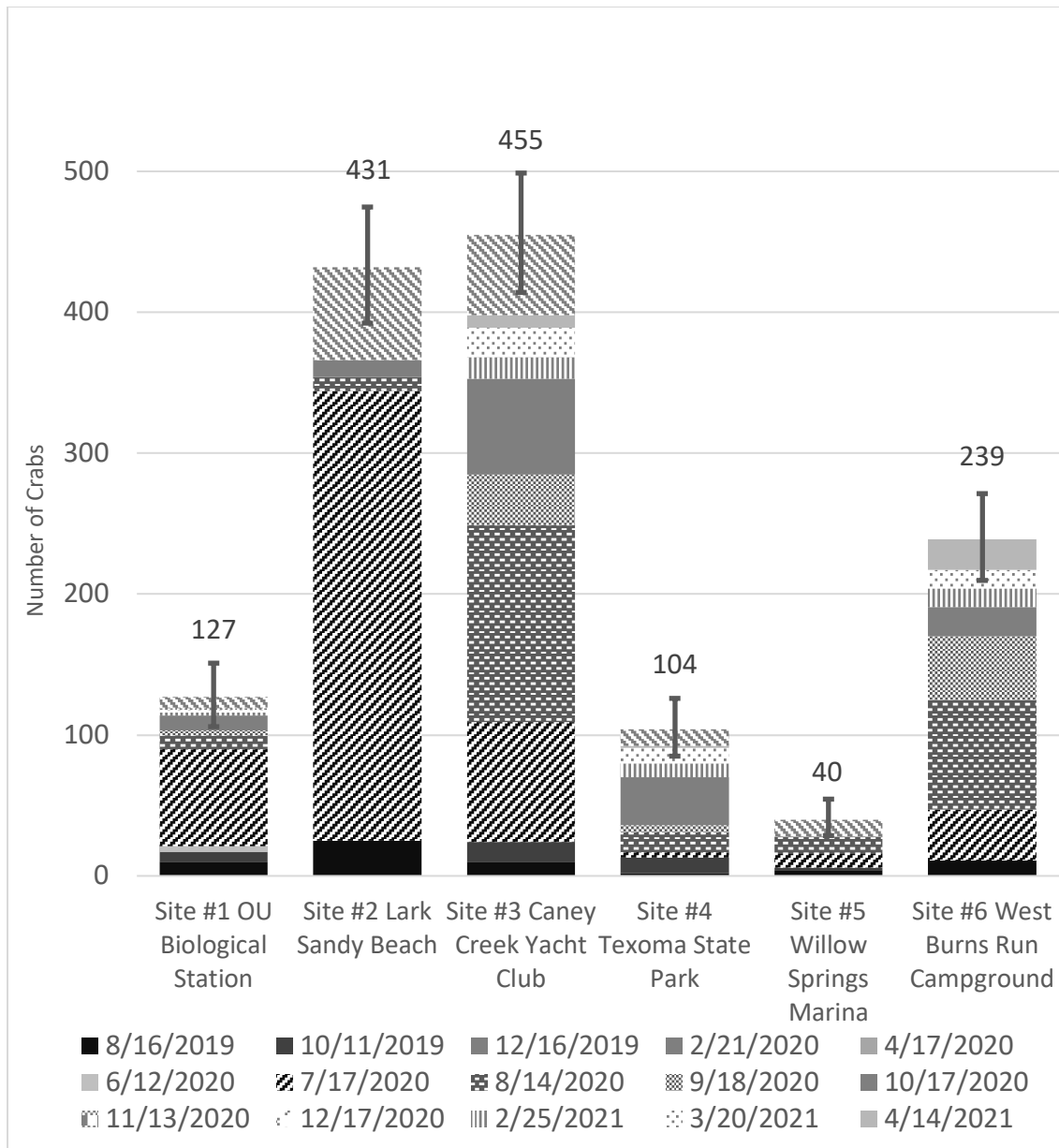


Figure 2. Number of *R. harrisii* observed at each site from August 2019 to August 2021.

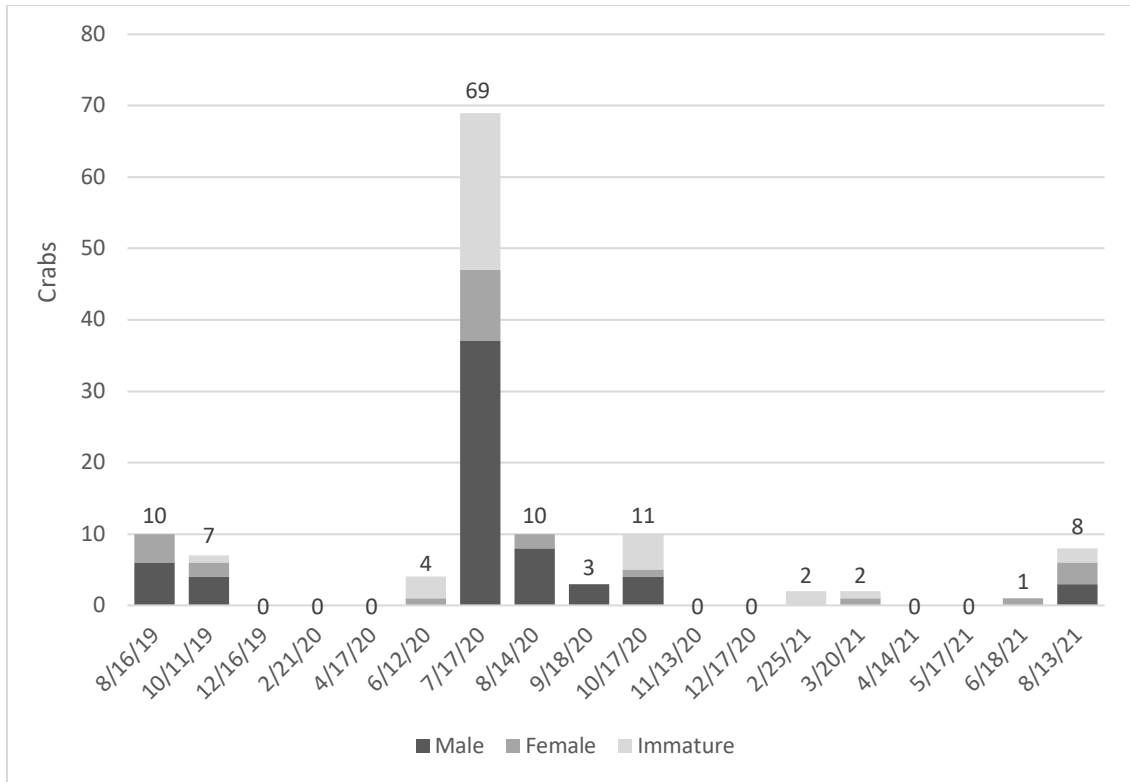


Figure 3. Number of male, female, and immature crabs collected at site #1 OU Biological Station from August 2019 to August 2021. Data labels are based on the number of crabs observed, including those collected.

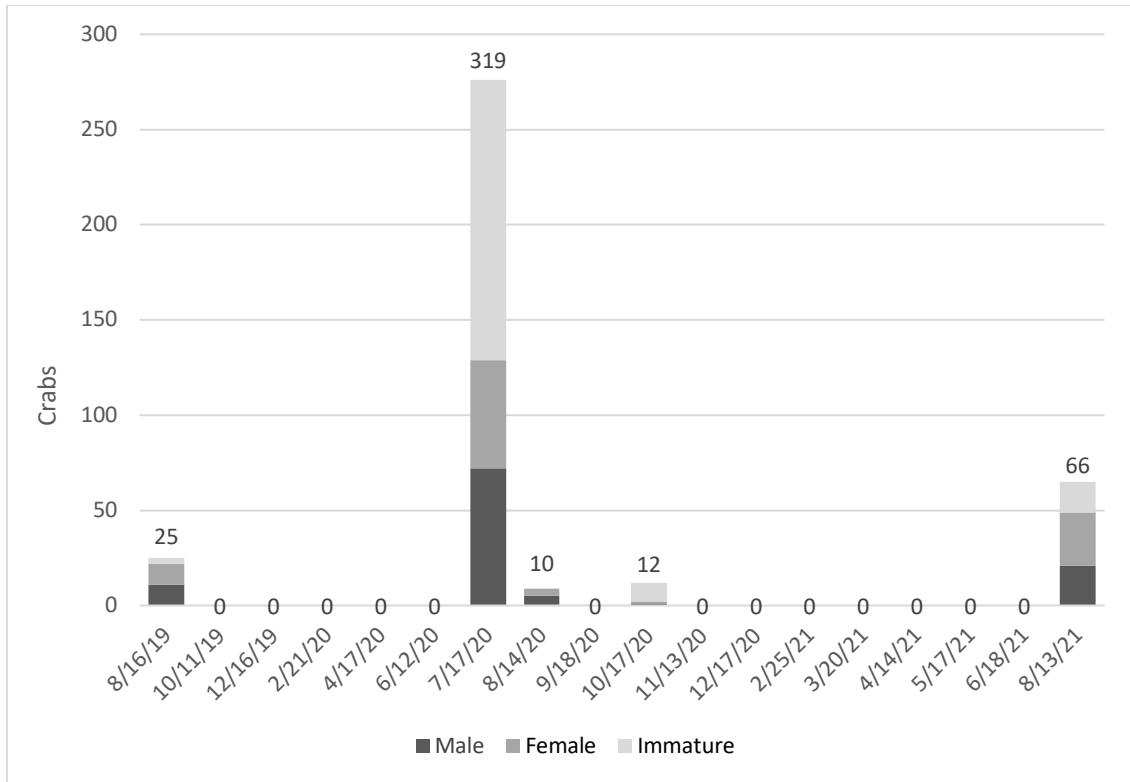


Figure 4. Number of male, female, and immature crabs collected at site #2 Lark Sandy Beach from August 2019 to August 2021. Data labels are based on the number of crabs observed, including those collected.

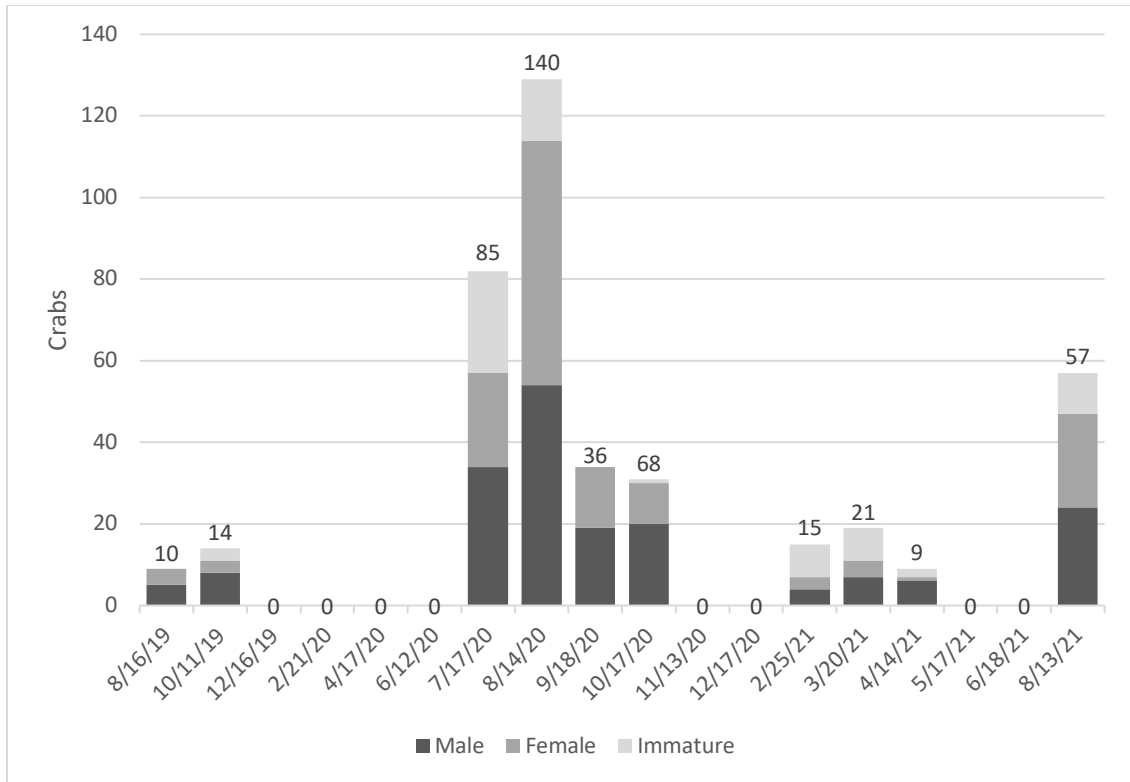


Figure 5. Number of male, female, and immature crabs collected at site #3 Caney Creek Yacht Club from August 2019 to August 2021. Data labels are based on the number of crabs observed, including those collected.

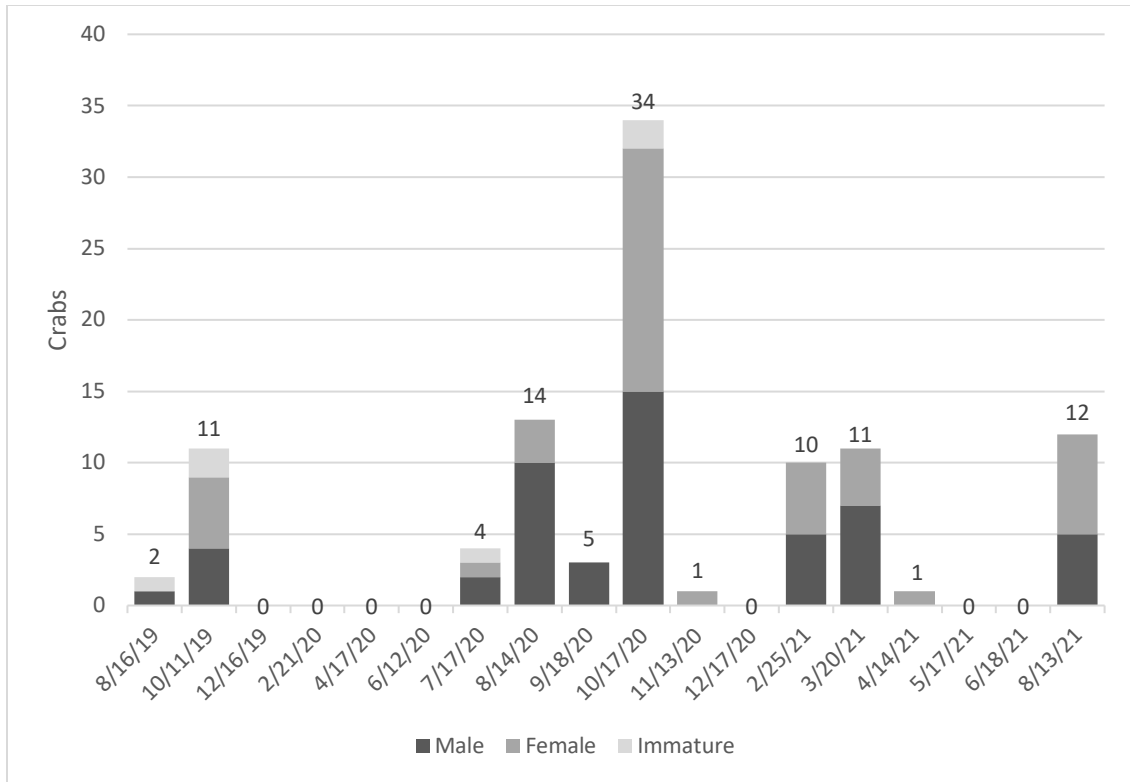


Figure 6. Number of male, female, and immature crabs collected at site #4 Texoma State Park from August 2019 to August 2021. Data labels are based on the number of crabs observed, including those collected.

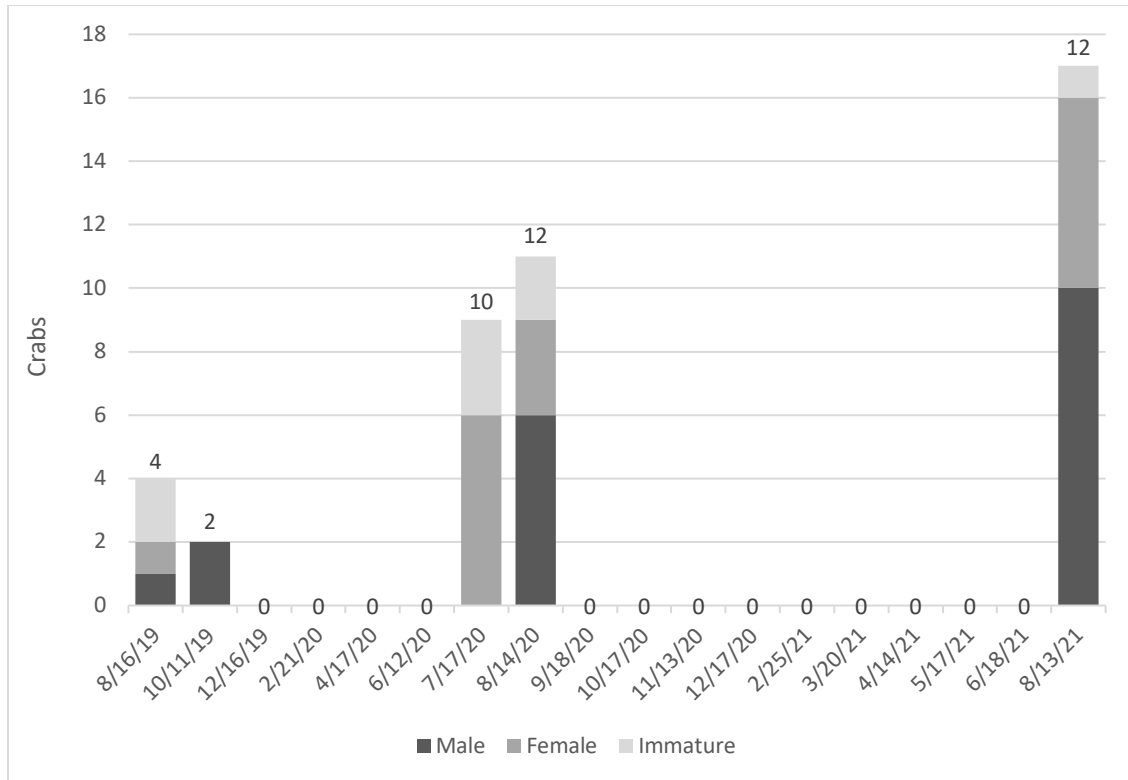


Figure 7. Number of male, female, and immature crabs collected at site #5 Willow Springs Marina from August 2019 to August 2021. Data labels are based on the number of crabs observed, including those collected.

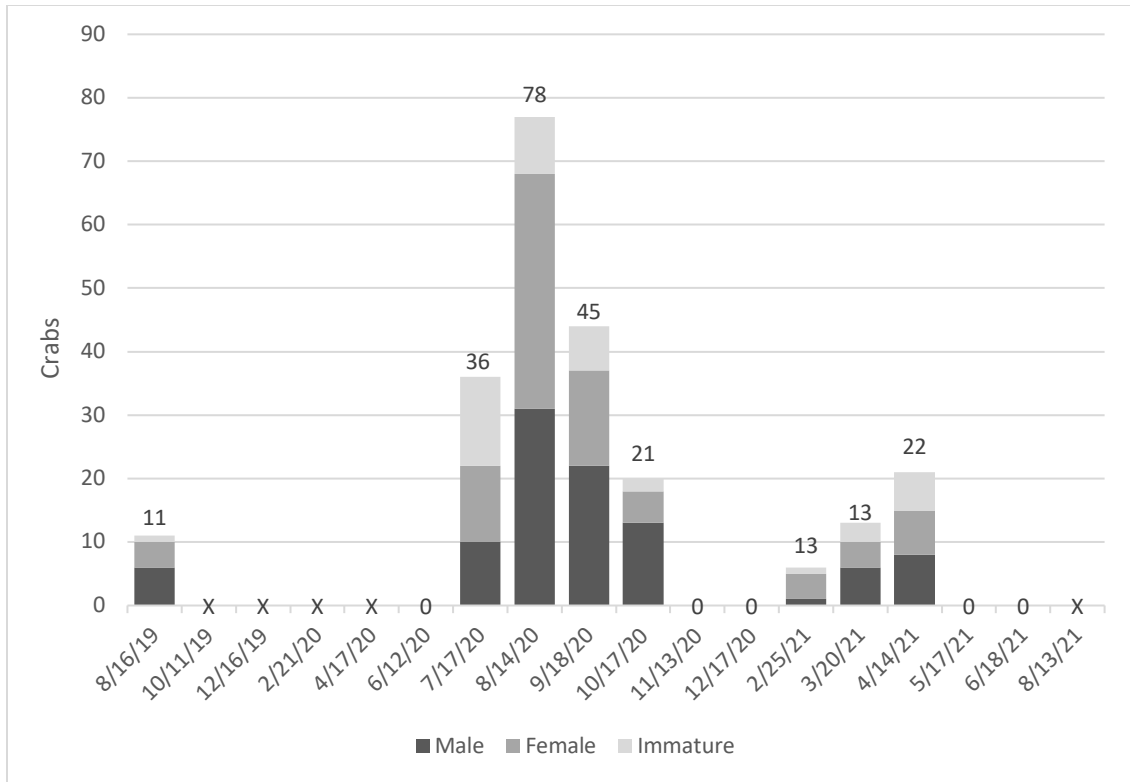


Figure 8. Number of male, female, and immature crabs collected at site #6 West Burns Run Campground from August 2019 to August 2021. The “X” indicates samples that did not occur due to site inaccessibility. Data labels are based on the number of crabs observed, including those collected.

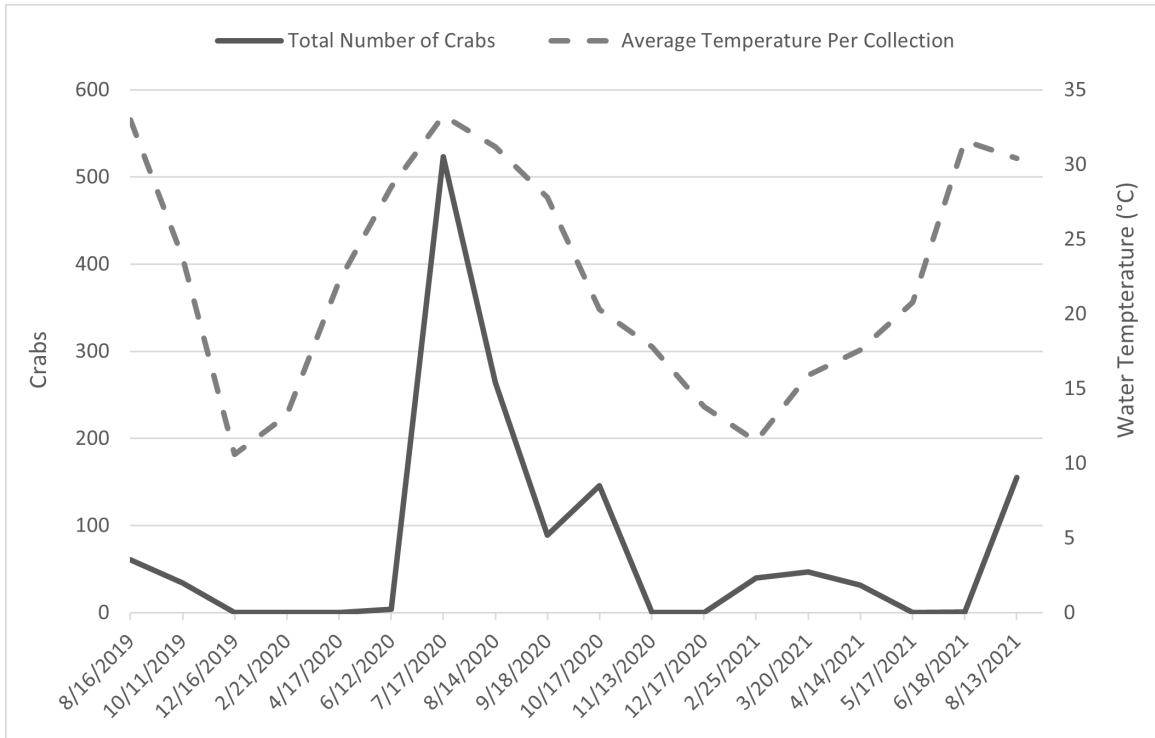


Figure 9. Line graph illustrating the total number of crabs observed and the average water temperature (°C) per collection from August 2019 to August 2021.

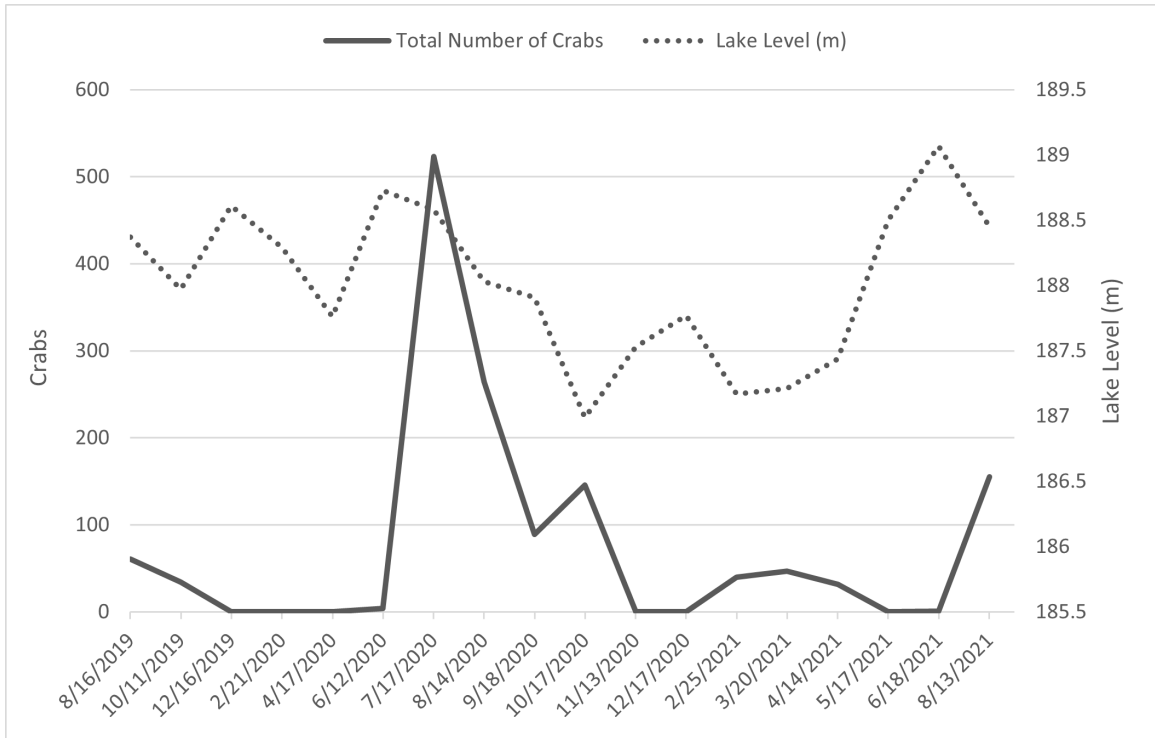


Figure 10. Line graph illustrating the total number of crabs observed and the lake level (m) at each collection from August 2019 to August 2021.

Table 1. Population density (individuals/m²) for *R. harrisii* at each site from August 2019 to August 2021. Data represents only crabs found within the two randomly selected quadrats at each site.

Population Density (individuals/m²)												
Date	Site #1		Site #2		Site #3		Site #4		Site #5		Site #6	
8/16/19	7	0	14	17	7	19	0	0	1	3	1	10
10/11/19	1	33	0	0	14	0	5	4	0	0	No access	
12/16/19	0	0	0	0	0	0	0	0	0	0	No access	
2/21/20	0	0	0	0	0	0	0	0	0	0	No access	
4/17/20	0	0	0	0	0	0	0	0	0	0	No access	
6/12/20	4	0	0	0	0	0	0	0	0	0	0	0
7/17/20	55	14	186	133	36	36	0	0	0	0	16	0
8/14/20	2	4	0	0	40	100	4	10	0	0	0	0
9/18/20	0	0	0	0	25	11	1	3	0	0	0	0
10/17/20	0	0	0	0	12	56	12	22	0	0	0	0
11/13/20	0	0	0	0	0	0	0	0	0	0	No access	
12/17/20	0	0	0	0	0	0	0	0	0	0	0	0
2/25/21	0	0	0	0	6	8	3	1	0	0	0	0
3/20/21	0	0	0	0	0	0	0	0	0	0	0	0
4/14/21	0	0	0	0	0	0	0	0	0	0	0	0
5/17/21	0	0	0	0	0	0	0	0	0	0	0	0
6/18/21	No sample		0	0	0	0	0	0	0	0	0	0
8/13/21	5	3	0	0	0	0	0	0	2	0	No sample	

Table 2. Presence-absence data for *R. harrisii* larvae in Lake Texoma. Strikes indicate results from less reliable methodology. Highlighted rows indicate samples containing ovigerous females. Water temperatures are the daytime averages from all sites during the sampling period.

Larvae Presence		
Date	Present in Sample	Water Temperature (°C)
8/16/2019	No	33.0
10/11/2019	No	23.8
12/16/2019	No	10.6
2/21/2020	No	13.2
4/17/2020	No	22.2
6/12/2020	No	28.5
7/17/2020	Yes	33.3
8/14/2020	Yes	31.2
9/18/2020	Yes	27.8
10/17/2020	Yes	20.3
11/13/2020	No	17.8
12/17/2020	No	13.8
1/1/2021	No	11.5
3/1/2021	No	15.9
4/21/2021	No	17.6
5/1/2021	No	20.8
6/1/2021	Yes	31.6
7/24/2021	Yes	-
8/13/2021	-	30.4

APPENDIX

Appendix A. Raw data for *Rhithropanopeus harrisi* (n=1,326) from August 2019 to August 2021. Carapace width (CW), carapace length (CL), left chela width (LCW), left chela length (LCL), right chela width (RCW), and right chela length (RCL) are listed in millimeters (mm).

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
16-Aug-19	#1	Female	8.45	6.80	2.70	6.15	2.60	5.55
16-Aug-19	#1	Female	8.00	6.55	1.85	4.80	2.60	5.45
16-Aug-19	#1	Female	7.45	5.35	1.85	4.35	1.90	4.65
16-Aug-19	#1	Female	7.30	6.00	1.85	4.45	2.10	5.00
16-Aug-19	#1	Male	10.40	7.40	3.20	7.00	3.85	8.05
16-Aug-19	#1	Male	8.45	6.10	2.35	5.80	2.85	6.85
16-Aug-19	#1	Male	7.60	4.80	2.10	4.80	2.90	5.20
16-Aug-19	#1	Male	7.45	5.75	2.35	5.00	1.70	4.45
16-Aug-19	#1	Male	6.45	4.05	1.45	3.45	2.05	4.15
16-Aug-19	#1	Male	6.35	5.00	1.45	4.10	2.00	4.40
16-Aug-19	#2	Female	10.90	8.60	3.40	7.50	4.15	8.40
16-Aug-19	#2	Female	8.65	5.60	2.25	5.60	-	-
16-Aug-19	#2	Female	6.15	4.65	1.50	3.90	2.00	4.10
16-Aug-19	#2	Female	5.00	4.20	3.00	1.50	1.40	3.00
16-Aug-19	#2	Immature	3.90	3.05	0.90	2.35	1.00	2.80
16-Aug-19	#2	Immature	2.55	2.00	0.60	1.60	0.60	1.50
16-Aug-19	#2	Immature	2.10	2.10	-	-	0.40	1.40
16-Aug-19	#2	Male	10.25	7.35	3.45	7.10	4.80	8.50
16-Aug-19	#2	Male	10.00	7.15	3.00	6.50	3.85	8.40
16-Aug-19	#2	Male	9.00	7.35	2.15	6.70	3.95	8.00
16-Aug-19	#2	Male	8.50	5.95	2.60	5.95	3.45	6.50
16-Aug-19	#2	Male	6.20	5.85	1.90	4.00	1.70	4.00
16-Aug-19	#2	Male	5.75	4.20	1.50	3.70	1.90	4.30
16-Aug-19	#2	Female	12.00	7.15	2.95	7.45	3.50	7.45
16-Aug-19	#2	Female	10.30	7.80	3.00	6.40	3.50	6.80
16-Aug-19	#2	Female	9.20	7.35	2.75	6.00	-	-
16-Aug-19	#2	Female	8.50	6.00	2.65	5.50	2.50	5.45
16-Aug-19	#2	Female	8.45	6.20	2.20	5.00	2.45	5.75
16-Aug-19	#2	Female	8.20	6.40	2.50	4.70	-	-
16-Aug-19	#2	Male	10.05	6.75	3.00	6.65	4.15	8.15
16-Aug-19	#2	Male	9.95	7.75	2.80	7.40	3.70	7.80

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
16-Aug-19	#2	Male	8.40	5.90	2.20	5.10	3.00	6.20
16-Aug-19	#2	Male	6.50	5.00	1.85	3.70	-	-
16-Aug-19	#2	Male	5.90	4.45	1.55	5.60	-	-
16-Aug-19	#3	-	5.35	4.15	1.25	3.40	1.55	3.60
16-Aug-19	#3	Female	9.95	7.10	1.95	5.75	3.40	6.85
16-Aug-19	#3	Female	9.00	6.45	2.40	5.00	2.80	6.00
16-Aug-19	#3	Female	8.35	5.70	1.95	4.85	2.45	5.45
16-Aug-19	#3	Female	8.15	7.70	2.45	5.50	2.95	6.00
16-Aug-19	#3	Male	11.50	8.75	3.50	7.80	4.20	9.65
16-Aug-19	#3	Male	11.50	8.10	5.25	9.70	3.60	8.10
16-Aug-19	#3	Male	11.20	7.85	3.35	7.75	4.90	8.95
16-Aug-19	#3	Male	10.50	8.15	3.35	8.35	4.30	8.50
16-Aug-19	#3	Male	9.45	7.40	3.15	6.60	3.90	7.45
16-Aug-19	#4	Immature	3.70	3.00	1.05	2.40	0.85	2.15
16-Aug-19	#4	Male	14.00	10.05	3.95	9.00	5.30	10.00
17-Aug-19	#5	Female	9.15	6.90	2.30	6.10	2.70	6.75
17-Aug-19	#5	Immature	3.90	2.90	1.15	2.45	-	-
17-Aug-19	#5	Immature	3.10	2.85	0.80	1.80	0.80	1.90
17-Aug-19	#5	Male	8.35	5.90	2.45	5.85	3.15	6.35
17-Aug-19	#6	Female	6.15	4.80	1.60	4.25	1.85	3.95
17-Aug-19	#6	Female	9.45	7.15	2.15	5.85	2.50	6.00
17-Aug-19	#6	Female	6.55	5.30	1.75	4.35	-	-
17-Aug-19	#6	Female	4.60	3.60	1.30	2.95	1.40	3.20
17-Aug-19	#6	Immature	3.55	3.10	0.95	2.20	1.00	2.30
17-Aug-19	#6	Male	14.50	10.80	5.95	13.00	4.40	10.35
17-Aug-19	#6	Male	7.05	5.55	-	-	2.60	5.35
17-Aug-19	#6	Male	6.60	4.95	1.70	4.20	2.05	4.60
17-Aug-19	#6	Male	6.20	5.10	1.20	4.45	1.95	4.50
17-Aug-19	#6	Male	5.85	4.70	1.45	3.75	-	-
17-Aug-19	#6	Male	4.15	3.10	0.90	2.20	1.15	2.60
11-Oct-19	#1	Female	5.50	4.45	3.85	1.65	3.40	1.60
11-Oct-19	#1	Female	5.25	4.20	3.60	1.20	3.30	1.60
11-Oct-19	#1	Immature	2.10	1.80	1.10	0.20	1.20	0.50
11-Oct-19	#1	Male	12.00	8.65	8.15	3.70	-	-
11-Oct-19	#1	Male	9.00	6.85	5.95	2.90	6.65	3.25
11-Oct-19	#1	Male	5.60	4.45	3.80	1.95	3.65	1.70
11-Oct-19	#1	Male	5.00	3.60	2.80	1.10	3.20	1.65
11-Oct-19	#3	Female	9.00	6.60	2.40	5.20	3.00	5.60
11-Oct-19	#3	Immature	2.50	2.00	0.60	1.50	0.60	1.50
11-Oct-19	#3	Male	10.06	7.90	3.20	7.60	4.65	9.60

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
11-Oct-19	#3	Female	7.30	5.30	2.00	4.50	2.40	4.80
11-Oct-19	#3	Immature	2.70	2.30	0.70	1.70	1.00	2.00
11-Oct-19	#3	Immature	1.65	1.30	0.40	1.00	0.40	1.00
11-Oct-19	#3	Male	5.90	4.20	1.50	3.60	1.70	3.60
11-Oct-19	#3	Female	6.50	5.20	1.70	4.50	2.00	4.40
11-Oct-19	#3	Male	10.85	7.70	3.20	6.65	3.70	8.00
11-Oct-19	#3	Male	10.00	7.40	2.60	7.00	3.80	7.70
11-Oct-19	#3	Male	9.80	7.20	2.90	6.10	3.90	7.50
11-Oct-19	#3	Male	7.50	5.50	2.05	4.50	2.70	5.00
11-Oct-19	#3	Male	6.90	5.65	2.00	4.50	2.40	4.60
11-Oct-19	#3	Male	5.60	4.20	1.10	3.60	1.60	3.60
12-Oct-19	#4	Male	7.55	5.45	1.95	4.75	2.50	5.20
12-Oct-19	#4	Immature	1.60	1.40	-	-	-	-
12-Oct-19	#4	Female	8.10	6.40	2.35	5.25	2.60	5.30
12-Oct-19	#4	Female	7.70	5.70	2.00	4.90	2.20	5.00
12-Oct-19	#4	Female	7.30	5.40	2.00	4.50	2.25	4.45
12-Oct-19	#4	Female	7.00	5.00	1.70	4.35	1.90	4.05
12-Oct-19	#4	Female	6.10	4.55	1.40	4.00	1.90	4.10
12-Oct-19	#4	Immature	1.55	1.20	0.35	0.95	-	-
12-Oct-19	#4	Male	7.05	5.10	2.05	5.00	2.75	5.20
12-Oct-19	#4	Male	6.20	4.50	1.50	4.00	2.10	4.40
12-Oct-19	#4	Male	4.60	3.55	1.20	2.80	1.30	2.55
12-Oct-19	#5	Male	10.35	7.60	3.35	7.00	-	-
12-Oct-19	#5	Male	5.90	4.45	1.50	3.70	1.85	3.70
12-Jun-20	#1	Female	4.90	4.30	-	-	-	-
12-Jun-20	#1	Immature	3.30	3.30	-	-	1.00	2.00
12-Jun-20	#1	Immature	2.10	2.00	0.50	1.10	0.50	1.10
12-Jun-20	#1	Immature	1.30	1.30	0.45	0.70	0.35	0.70
17-Jul-20	#1	Male	13.00	9.40	4.30	10.20	6.10	10.40
17-Jul-20	#1	Male	11.90	9.20	3.10	8.10	4.40	8.80
17-Jul-20	#1	Male	10.30	8.10	3.10	6.40	3.60	7.70
17-Jul-20	#1	Male	9.90	7.05	3.00	6.70	3.20	6.80
17-Jul-20	#1	Female	9.50	7.10	2.20	6.50	2.90	6.30
17-Jul-20	#1	Male	9.40	7.00	3.20	6.50	4.00	8.40
17-Jul-20	#1	Female	8.40	6.10	2.30	5.20	3.00	5.30
17-Jul-20	#1	Female	8.20	6.20	1.80	5.20	2.20	5.00
17-Jul-20	#1	Female	7.70	5.90	2.10	4.85	2.50	4.90
17-Jul-20	#1	Female	7.50	5.90	1.80	4.95	2.30	4.70
17-Jul-20	#1	Male	7.50	6.60	2.00	4.80	2.40	4.80
17-Jul-20	#1	Female	7.10	5.00	1.85	4.50	2.30	4.50

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Jul-20	#1	Male	7.00	5.40	2.00	4.80	2.30	4.70
17-Jul-20	#1	Male	7.00	5.60	2.10	4.70	2.40	4.50
17-Jul-20	#1	Male	6.90	4.80	2.00	4.30	2.30	4.40
17-Jul-20	#1	Female	6.80	4.90	2.00	4.50	2.30	3.80
17-Jul-20	#1	Male	6.75	5.80	2.00	4.80	2.20	4.60
17-Jul-20	#1	Male	6.70	5.40	2.10	4.40	2.60	5.00
17-Jul-20	#1	Male	6.60	5.60	1.95	4.80	2.60	4.80
17-Jul-20	#1	Male	6.60	5.40	1.80	4.25	2.00	4.30
17-Jul-20	#1	Male	6.60	5.30	2.00	4.10	2.50	4.50
17-Jul-20	#1	Male	6.60	5.40	2.00	4.60	2.30	4.40
17-Jul-20	#1	Male	6.50	5.30	1.90	4.60	2.10	4.75
17-Jul-20	#1	Female	6.20	4.70	-	-	1.30	3.50
17-Jul-20	#1	Male	6.10	4.90	-	-	1.80	3.55
17-Jul-20	#1	Male	6.00	4.20	1.60	3.80	1.80	3.60
17-Jul-20	#1	Male	5.85	4.10	1.80	3.55	2.00	3.80
17-Jul-20	#1	Male	5.45	4.20	-	-	-	-
17-Jul-20	#1	Male	5.40	4.30	1.30	3.30	1.60	3.00
17-Jul-20	#1	Female	5.20	4.20	1.40	3.10	-	-
17-Jul-20	#1	Male	5.15	4.10	1.50	3.20	1.70	3.40
17-Jul-20	#1	Male	5.10	4.10	1.20	3.20	1.60	3.30
17-Jul-20	#1	Male	5.05	4.10	1.50	3.20	1.30	3.10
17-Jul-20	#1	Male	4.95	3.85	1.50	3.05	1.60	3.40
17-Jul-20	#1	Male	4.90	3.80	1.30	2.75	1.30	3.00
17-Jul-20	#1	Male	4.85	3.80	1.40	3.10	-	-
17-Jul-20	#1	Male	4.85	3.45	1.40	3.20	1.40	3.10
17-Jul-20	#1	Male	4.80	3.80	1.30	3.10	-	-
17-Jul-20	#1	Male	4.70	3.70	1.20	3.00	1.30	2.70
17-Jul-20	#1	Male	4.60	3.00	-	-	1.30	2.80
17-Jul-20	#1	Male	4.45	3.50	1.20	2.65	1.30	2.50
17-Jul-20	#1	Male	4.35	3.55	1.00	2.85	1.40	2.80
17-Jul-20	#1	Male	4.35	3.80	1.00	3.10	1.10	2.80
17-Jul-20	#1	Male	4.30	3.75	1.10	2.90	1.30	2.90
17-Jul-20	#1	Male	4.30	3.25	1.20	2.60	1.20	2.70
17-Jul-20	#1	Female	4.20	3.75	1.20	3.10	1.20	2.70
17-Jul-20	#1	Male	4.20	3.40	1.10	2.70	1.50	2.80
17-Jul-20	#1	Immature	3.80	3.00	1.20	2.40	1.20	2.40
17-Jul-20	#1	Immature	3.70	3.00	1.00	2.00	-	-
17-Jul-20	#1	Immature	3.50	3.00	1.00	2.10	1.10	2.10
17-Jul-20	#1	Immature	3.40	3.10	1.05	2.30	1.00	2.10
17-Jul-20	#1	Immature	3.30	2.70	0.85	1.95	0.90	2.00

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Jul-20	#1	Immature	3.20	2.70	0.40	1.80	1.00	2.00
17-Jul-20	#1	Immature	3.20	2.75	0.75	1.80	0.90	2.10
17-Jul-20	#1	Immature	3.10	3.00	0.90	2.00	1.00	2.00
17-Jul-20	#1	Immature	3.05	2.50	0.80	2.00	0.80	2.00
17-Jul-20	#1	Immature	3.00	2.60	0.75	1.20	0.90	1.65
17-Jul-20	#1	Immature	3.00	2.20	0.80	2.00	1.00	2.00
17-Jul-20	#1	Immature	3.00	2.60	-	-	0.60	1.50
17-Jul-20	#1	Immature	2.90	2.35	0.80	1.65	0.90	1.90
17-Jul-20	#1	Immature	2.90	2.30	0.70	1.80	0.90	2.05
17-Jul-20	#1	Immature	2.85	2.30	0.70	1.60	0.90	1.85
17-Jul-20	#1	Immature	2.70	2.20	0.55	1.65	0.60	1.50
17-Jul-20	#1	Immature	2.50	2.40	0.40	1.70	0.60	1.50
17-Jul-20	#1	Immature	2.40	2.00	0.55	1.40	0.60	1.50
17-Jul-20	#1	Immature	2.20	1.85	0.45	1.85	-	-
17-Jul-20	#1	Immature	2.10	2.00	-	-	0.50	1.40
17-Jul-20	#1	Immature	2.10	1.55	0.45	1.10	0.60	1.10
17-Jul-20	#1	Immature	1.90	1.80	0.80	1.40	0.70	1.20
17-Jul-20	#2	-	-	-	-	-	2.40	4.80
17-Jul-20	#2	Male	14.40	10.10	4.80	10.40	6.60	13.10
17-Jul-20	#2	Male	14.00	10.10	4.55	10.00	5.80	10.00
17-Jul-20	#2	Male	13.45	9.80	4.50	10.25	6.10	12.20
17-Jul-20	#2	Male	12.50	9.15	4.45	9.50	4.70	10.10
17-Jul-20	#2	Male	12.40	9.25	-	-	-	-
17-Jul-20	#2	Female	11.10	8.00	2.75	6.55	-	-
17-Jul-20	#2	Female	10.30	7.65	3.10	6.70	3.80	7.50
17-Jul-20	#2	Female	10.15	7.80	2.80	6.15	3.40	6.60
17-Jul-20	#2	Female	10.00	7.60	2.75	6.50	3.50	6.60
17-Jul-20	#2	Male	10.00	7.40	2.75	6.80	3.30	7.40
17-Jul-20	#2	Female	9.90	7.30	2.55	6.50	1.80	5.30
17-Jul-20	#2	Female	9.15	6.80	2.45	5.50	-	-
17-Jul-20	#2	Female	8.90	6.75	2.25	5.80	2.50	5.80
17-Jul-20	#2	Male	8.85	6.90	3.00	6.10	3.15	6.60
17-Jul-20	#2	Male	8.70	6.50	2.50	5.50	3.20	6.30
17-Jul-20	#2	Male	8.55	6.45	-	-	3.30	6.15
17-Jul-20	#2	Male	8.20	6.30	2.50	4.30	3.30	6.30
17-Jul-20	#2	Female	8.00	6.55	-	-	-	-
17-Jul-20	#2	Male	7.60	6.00	-	-	1.80	4.45
17-Jul-20	#2	Female	7.30	5.50	4.40	1.80	5.20	2.25
17-Jul-20	#2	Male	7.30	5.65	1.80	4.45	2.60	5.00
17-Jul-20	#2	-	7.20	5.60	-	-	-	-

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Jul-20	#2	Female	7.20	5.50	2.00	4.60	-	-
17-Jul-20	#2	Male	7.20	5.10	1.90	4.65	2.50	4.95
17-Jul-20	#2	Male	7.20	5.45	2.00	5.10	2.40	5.00
17-Jul-20	#2	Female	7.05	5.35	1.75	4.90	2.40	4.80
17-Jul-20	#2	Male	7.00	5.70	1.65	3.65	2.40	4.40
17-Jul-20	#2	Male	6.90	5.05	2.00	4.15	2.30	4.50
17-Jul-20	#2	Male	6.80	5.00	2.90	4.50	1.60	3.80
17-Jul-20	#2	Male	6.60	5.05	1.80	4.10	1.90	4.30
17-Jul-20	#2	Female	6.50	4.90	1.10	3.10	2.10	4.20
17-Jul-20	#2	Female	6.50	4.66	1.45	4.00	1.80	3.90
17-Jul-20	#2	Male	6.50	4.95	1.60	4.35	1.70	4.50
17-Jul-20	#2	Male	6.50	4.90	1.80	4.00	1.80	4.30
17-Jul-20	#2	Female	6.30	4.85	1.85	3.75	-	-
17-Jul-20	#2	Male	6.30	4.90	1.55	3.60	1.90	4.20
17-Jul-20	#2	Male	6.30	4.70	1.70	3.50	2.20	4.55
17-Jul-20	#2	Male	6.20	5.15	1.80	4.10	2.00	4.20
17-Jul-20	#2	Male	6.15	4.40	1.60	3.80	1.80	3.60
17-Jul-20	#2	Male	6.05	4.70	1.50	3.80	2.10	4.10
17-Jul-20	#2	Male	6.05	4.45	1.70	3.70	2.20	4.50
17-Jul-20	#2	Female	6.00	4.70	3.80	1.50	4.00	1.70
17-Jul-20	#2	Male	6.00	4.40	1.20	3.70	-	-
17-Jul-20	#2	Male	6.00	4.50	3.55	1.50	3.80	2.00
17-Jul-20	#2	Male	5.90	4.40	3.55	1.80	3.40	1.40
17-Jul-20	#2	Female	5.85	4.80	-	-	1.70	3.80
17-Jul-20	#2	Female	5.80	4.50	1.70	3.50	1.80	3.85
17-Jul-20	#2	Male	5.80	4.00	-	-	-	-
17-Jul-20	#2	Female	5.70	4.15	1.60	3.40	1.90	3.80
17-Jul-20	#2	Female	5.70	4.35	1.40	3.30	1.70	3.80
17-Jul-20	#2	Male	5.70	4.55	1.40	3.80	1.80	3.80
17-Jul-20	#2	Female	5.60	4.30	1.45	3.25	1.70	3.30
17-Jul-20	#2	Female	5.60	4.30	1.35	3.10	1.70	3.65
17-Jul-20	#2	Female	5.60	4.10	1.50	3.30	1.70	3.45
17-Jul-20	#2	Female	5.60	4.35	1.55	3.10	1.90	3.40
17-Jul-20	#2	Male	5.60	4.35	1.40	3.30	1.75	3.55
17-Jul-20	#2	Male	5.60	4.50	1.40	3.50	2.00	4.00
17-Jul-20	#2	Female	5.55	4.25	1.50	3.00	1.60	3.50
17-Jul-20	#2	Male	5.55	4.40	1.55	3.45	1.80	4.00
17-Jul-20	#2	Male	5.55	4.25	1.50	3.45	1.85	3.70
17-Jul-20	#2	Female	5.50	4.20	1.90	3.40	1.70	3.70
17-Jul-20	#2	Female	5.50	4.50	1.50	3.30	1.80	3.75
17-Jul-20	#2	Female	5.50	4.20	1.30	3.30	1.60	3.40

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Jul-20	#2	Male	5.50	3.80	1.40	3.30	1.70	3.40
17-Jul-20	#2	Female	5.45	4.15	1.20	3.40	1.40	3.40
17-Jul-20	#2	Male	5.45	4.25	1.50	3.25	-	-
17-Jul-20	#2	Male	5.40	4.20	1.80	3.95	2.50	4.55
17-Jul-20	#2	Male	5.30	4.40	-	-	1.80	3.50
17-Jul-20	#2	Male	5.25	4.00	1.40	3.20	1.70	3.65
17-Jul-20	#2	Female	5.10	3.90	1.40	3.20	1.55	3.45
17-Jul-20	#2	Male	5.10	3.65	1.30	3.20	1.70	3.50
17-Jul-20	#2	Male	5.10	4.00	1.10	3.20	-	-
17-Jul-20	#2	Female	5.05	4.50	1.30	3.00	1.50	3.50
17-Jul-20	#2	Female	5.00	3.80	1.20	3.10	1.40	3.10
17-Jul-20	#2	Male	5.00	4.05	1.15	3.00	1.50	3.10
17-Jul-20	#2	Male	5.00	3.85	1.40	3.00	1.40	3.25
17-Jul-20	#2	Female	4.90	4.00	-	-	1.00	2.40
17-Jul-20	#2	Male	4.90	3.80	1.45	3.05	0.80	2.50
17-Jul-20	#2	Female	4.85	3.85	-	-	1.35	2.90
17-Jul-20	#2	-	4.80	2.75	1.30	2.90	-	-
17-Jul-20	#2	Female	4.80	3.80	1.20	2.70	1.30	3.20
17-Jul-20	#2	Female	4.80	3.70	1.60	3.20	1.10	2.10
17-Jul-20	#2	Male	4.75	3.80	-	-	1.50	3.20
17-Jul-20	#2	Female	4.70	3.70	1.40	3.25	1.60	3.10
17-Jul-20	#2	Female	4.70	3.60	1.15	2.70	1.20	2.90
17-Jul-20	#2	Female	4.70	3.70	1.15	2.60	1.20	2.60
17-Jul-20	#2	Female	4.70	3.70	1.25	2.65	1.35	2.90
17-Jul-20	#2	Female	4.60	3.50	1.15	2.80	1.50	3.10
17-Jul-20	#2	Male	4.60	3.60	1.15	2.60	1.20	2.85
17-Jul-20	#2	Male	4.60	3.55	1.15	2.90	1.40	3.20
17-Jul-20	#2	Female	4.55	3.60	1.10	2.80	1.20	2.90
17-Jul-20	#2	Female	4.55	3.20	1.15	2.60	1.25	2.75
17-Jul-20	#2	Male	4.55	3.30	-	-	-	-
17-Jul-20	#2	Male	4.55	3.50	0.90	2.50	1.35	2.80
17-Jul-20	#2	Male	4.55	3.60	-	-	1.50	4.20
17-Jul-20	#2	Female	4.50	3.50	1.40	2.90	0.90	2.60
17-Jul-20	#2	Female	4.50	3.55	1.20	2.60	-	-
17-Jul-20	#2	Female	4.50	3.60	1.20	2.80	1.20	2.80
17-Jul-20	#2	Female	4.50	3.50	1.20	2.30	-	-
17-Jul-20	#2	Female	4.50	3.50	1.20	2.70	1.35	2.90
17-Jul-20	#2	Female	4.50	3.55	1.30	2.60	1.30	2.70
17-Jul-20	#2	Male	4.50	3.60	1.30	2.60	1.55	2.80
17-Jul-20	#2	Male	4.45	3.65	1.25	2.90	1.40	2.90
17-Jul-20	#2	Female	4.40	3.50	1.10	2.70	1.10	2.50

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Jul-20	#2	Female	4.40	3.60	1.20	2.70	-	-
17-Jul-20	#2	Male	4.40	3.70	1.35	3.00	0.90	2.30
17-Jul-20	#2	Male	4.40	3.50	1.10	2.30	-	-
17-Jul-20	#2	Male	4.35	3.50	1.20	2.60	1.40	3.10
17-Jul-20	#2	Female	4.30	3.60	1.15	2.60	1.35	2.80
17-Jul-20	#2	Female	4.30	3.20	-	-	-	-
17-Jul-20	#2	Male	4.30	3.30	-	-	0.90	2.40
17-Jul-20	#2	Male	4.30	3.05	0.80	2.30	1.00	2.80
17-Jul-20	#2	Male	4.30	3.35	1.10	2.50	1.20	2.70
17-Jul-20	#2	Male	4.30	3.35	1.10	2.40	1.40	2.90
17-Jul-20	#2	Male	4.30	3.50	1.10	2.50	1.40	3.00
17-Jul-20	#2	Female	4.25	3.50	-	-	1.30	2.90
17-Jul-20	#2	Male	4.25	3.15	1.35	2.70	1.00	2.50
17-Jul-20	#2	-	4.20	3.30	1.20	2.60	1.40	2.75
17-Jul-20	#2	Female	4.20	3.25	1.30	2.60	0.90	2.50
17-Jul-20	#2	Female	4.20	3.30	1.00	2.50	1.20	2.80
17-Jul-20	#2	Male	4.20	3.40	1.30	2.80	1.10	2.50
17-Jul-20	#2	Male	4.20	3.50	1.00	2.10	1.20	2.60
17-Jul-20	#2	Male	4.20	3.20	1.05	2.50	1.15	2.80
17-Jul-20	#2	Male	4.20	3.30	1.05	2.45	1.20	2.70
17-Jul-20	#2	Male	4.20	3.20	1.10	2.40	1.20	2.65
17-Jul-20	#2	Male	4.15	3.00	-	-	-	-
17-Jul-20	#2	Male	4.15	3.25	1.00	2.35	1.25	2.75
17-Jul-20	#2	Female	4.10	3.40	1.00	2.60	1.40	2.80
17-Jul-20	#2	Female	4.05	3.30	1.15	2.50	1.25	2.50
17-Jul-20	#2	-	4.00	3.20	1.05	2.30	1.20	2.70
17-Jul-20	#2	-	4.00	3.00	1.00	2.25	1.10	2.30
17-Jul-20	#2	Male	4.00	3.15	1.05	2.55	1.30	2.55
17-Jul-20	#2	Male	4.00	3.20	0.90	2.50	-	-
17-Jul-20	#2	Male	4.00	3.00	1.10	2.40	1.20	2.50
17-Jul-20	#2	Immature	3.90	2.80	1.00	2.20	1.15	2.50
17-Jul-20	#2	Immature	3.90	3.20	0.95	2.20	1.15	2.50
17-Jul-20	#2	Immature	3.90	2.90	0.95	2.20	-	-
17-Jul-20	#2	Immature	3.90	3.05	1.10	2.40	0.90	2.10
17-Jul-20	#2	Immature	3.90	3.10	0.95	2.30	1.30	2.50
17-Jul-20	#2	Immature	3.90	3.00	1.00	2.20	1.20	2.40
17-Jul-20	#2	Immature	3.85	3.05	0.90	2.30	1.20	2.45
17-Jul-20	#2	Immature	3.85	2.60	-	-	0.65	1.75
17-Jul-20	#2	Immature	3.85	3.05	1.05	2.30	1.10	2.60
17-Jul-20	#2	Immature	3.85	3.00	-	-	0.75	2.20
17-Jul-20	#2	Immature	3.85	2.90	1.00	2.35	-	-

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Jul-20	#2	Immature	3.80	2.95	0.90	2.20	1.10	2.50
17-Jul-20	#2	Immature	3.80	3.00	-	-	1.00	2.45
17-Jul-20	#2	Immature	3.80	3.10	1.00	2.10	1.10	2.60
17-Jul-20	#2	Immature	3.80	3.15	0.90	2.10	1.10	2.70
17-Jul-20	#2	Immature	3.80	3.10	1.00	2.40	1.10	2.40
17-Jul-20	#2	Immature	3.80	3.20	1.10	2.70	1.00	2.10
17-Jul-20	#2	Immature	3.80	3.00	1.05	2.30	0.80	2.10
17-Jul-20	#2	Immature	3.80	3.00	0.95	2.20	1.05	2.20
17-Jul-20	#2	Immature	3.80	3.10	1.00	2.20	1.10	2.35
17-Jul-20	#2	Immature	3.75	3.20	1.10	2.30	1.20	2.55
17-Jul-20	#2	Immature	3.75	3.20	1.00	2.20	1.10	2.55
17-Jul-20	#2	Immature	3.75	3.10	1.00	2.40	1.25	2.40
17-Jul-20	#2	Immature	3.70	2.90	0.90	2.40	0.70	2.30
17-Jul-20	#2	Immature	3.70	3.10	1.00	2.15	1.00	2.45
17-Jul-20	#2	Immature	3.70	3.15	0.95	2.30	1.00	2.10
17-Jul-20	#2	Immature	3.70	2.80	0.90	2.20	-	-
17-Jul-20	#2	Immature	3.70	3.10	0.95	2.10	0.95	2.45
17-Jul-20	#2	Immature	3.70	2.90	1.10	1.40	0.60	1.90
17-Jul-20	#2	Immature	3.70	2.85	0.75	2.10	1.10	2.20
17-Jul-20	#2	Immature	3.60	3.10	0.95	2.50	0.90	2.30
17-Jul-20	#2	Immature	3.60	2.95	0.80	2.20	0.95	2.30
17-Jul-20	#2	Immature	3.60	2.75	1.00	2.30	1.00	2.30
17-Jul-20	#2	Immature	3.60	3.00	1.00	2.40	1.10	2.40
17-Jul-20	#2	Immature	3.60	3.00	0.90	2.10	0.90	2.70
17-Jul-20	#2	Immature	3.55	2.70	0.90	1.95	1.10	2.30
17-Jul-20	#2	Immature	3.50	2.80	1.05	2.30	-	-
17-Jul-20	#2	Immature	3.50	2.70	0.70	1.65	0.65	1.70
17-Jul-20	#2	Immature	3.50	2.80	0.90	2.15	1.00	3.20
17-Jul-20	#2	Immature	3.50	2.80	0.95	2.10	1.05	2.15
17-Jul-20	#2	Immature	3.50	2.75	0.90	2.10	1.10	2.20
17-Jul-20	#2	Immature	3.50	2.85	1.00	2.20	1.00	2.20
17-Jul-20	#2	Immature	3.40	2.80	0.55	1.80	0.60	1.80
17-Jul-20	#2	Immature	3.40	2.70	0.90	2.10	1.00	2.30
17-Jul-20	#2	Immature	3.35	2.80	0.75	1.85	0.90	2.00
17-Jul-20	#2	Immature	3.30	2.15	-	-	-	-
17-Jul-20	#2	Immature	3.30	2.85	0.95	1.90	1.00	2.00
17-Jul-20	#2	Immature	3.30	2.70	0.80	1.95	0.90	2.00
17-Jul-20	#2	Immature	3.30	2.70	0.70	1.90	0.80	2.20
17-Jul-20	#2	Immature	3.20	2.70	0.90	1.80	0.90	1.75
17-Jul-20	#2	Immature	3.20	2.60	0.75	1.90	-	-
17-Jul-20	#2	Immature	3.20	2.50	0.80	1.70	0.50	1.70

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Jul-20	#2	Immature	3.20	2.70	0.70	2.00	0.90	2.00
17-Jul-20	#2	Immature	3.20	2.50	0.80	1.70	0.85	1.90
17-Jul-20	#2	Immature	3.15	3.40	-	-	0.90	2.00
17-Jul-20	#2	Immature	3.15	2.70	0.90	2.10	0.70	1.95
17-Jul-20	#2	Immature	3.10	2.90	-	-	-	-
17-Jul-20	#2	Immature	3.10	2.45	0.85	1.80	-	-
17-Jul-20	#2	Immature	3.10	2.35	-	-	0.85	1.90
17-Jul-20	#2	Immature	3.10	2.50	0.90	1.70	0.60	1.50
17-Jul-20	#2	Immature	3.10	2.30	0.50	1.50	1.00	2.15
17-Jul-20	#2	Immature	3.10	2.60	0.80	1.95	0.90	2.00
17-Jul-20	#2	Immature	3.00	2.45	0.65	1.50	-	-
17-Jul-20	#2	Immature	3.00	2.50	-	-	0.90	1.80
17-Jul-20	#2	Immature	3.00	2.60	0.80	1.80	0.90	1.80
17-Jul-20	#2	Immature	3.00	2.55	0.80	1.90	0.90	1.80
17-Jul-20	#2	Immature	3.00	2.80	0.85	1.90	0.90	1.85
17-Jul-20	#2	Immature	3.00	2.70	0.75	1.90	1.05	2.10
17-Jul-20	#2	Immature	3.00	2.70	0.9	2.00	0.85	1.90
17-Jul-20	#2	Immature	2.95	2.55	0.50	1.60	0.70	1.60
17-Jul-20	#2	Immature	2.90	2.30	0.70	1.60	0.85	1.80
17-Jul-20	#2	Immature	2.90	2.70	-	-	0.85	1.80
17-Jul-20	#2	Immature	2.90	2.40	0.75	1.95	0.70	1.75
17-Jul-20	#2	Immature	2.90	1.30	1.30	2.90	1.50	3.15
17-Jul-20	#2	Immature	2.90	2.35	0.85	1.70	0.60	1.75
17-Jul-20	#2	Immature	2.80	2.30	0.75	1.55	-	-
17-Jul-20	#2	Immature	2.80	2.30	0.55	1.55	0.60	1.80
17-Jul-20	#2	Immature	2.80	2.10	0.60	1.50	-	-
17-Jul-20	#2	Immature	2.80	2.40	0.55	1.40	0.60	1.60
17-Jul-20	#2	Immature	2.80	2.30	0.45	1.30	0.45	1.40
17-Jul-20	#2	Immature	2.80	2.30	0.70	1.55	0.80	1.80
17-Jul-20	#2	Immature	2.70	2.30	0.65	1.70	0.70	1.80
17-Jul-20	#2	Immature	2.70	2.25	0.60	1.40	0.65	1.90
17-Jul-20	#2	Immature	2.70	2.20	0.50	1.50	0.70	1.80
17-Jul-20	#2	Immature	2.70	2.35	0.65	1.60	0.80	1.80
17-Jul-20	#2	Immature	2.70	2.20	0.65	1.55	-	-
17-Jul-20	#2	Immature	2.70	2.35	0.70	1.60	0.80	1.60
17-Jul-20	#2	Immature	2.65	2.30	0.70	1.70	0.80	1.70
17-Jul-20	#2	Immature	2.65	2.20	0.65	1.60	0.70	1.60
17-Jul-20	#2	Immature	2.60	2.35	0.70	1.75	0.70	1.75
17-Jul-20	#2	Immature	2.60	2.20	-	-	0.70	1.50
17-Jul-20	#2	Immature	2.60	2.20	0.75	1.30	0.70	1.70
17-Jul-20	#2	Immature	2.55	2.15	0.60	1.35	-	-

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Jul-20	#2	Immature	2.40	1.25	0.40	1.00	0.55	1.40
17-Jul-20	#2	Immature	2.40	2.20	0.60	1.50	0.70	1.50
17-Jul-20	#2	Immature	2.40	2.35	0.70	1.50	0.70	1.45
17-Jul-20	#2	Immature	2.35	1.85	0.45	1.30	0.50	1.30
17-Jul-20	#2	Immature	2.30	2.00	0.60	1.40	0.70	1.55
17-Jul-20	#2	Immature	2.30	1.90	-	-	0.40	1.30
17-Jul-20	#2	Immature	2.30	2.10	0.45	1.20	0.70	1.40
17-Jul-20	#2	Immature	2.30	2.00	0.60	1.40	0.70	1.50
17-Jul-20	#2	Immature	2.30	2.00	0.60	1.40	0.60	1.50
17-Jul-20	#2	Immature	2.30	2.00	-	-	-	-
17-Jul-20	#2	Immature	2.30	2.20	0.55	1.35	-	-
17-Jul-20	#2	Immature	2.25	2.10	0.50	1.40	0.60	1.40
17-Jul-20	#2	Immature	2.25	1.80	-	-	-	-
17-Jul-20	#2	Immature	2.20	2.00	0.30	1.40	-	-
17-Jul-20	#2	Immature	2.20	2.10	0.60	1.30	-	-
17-Jul-20	#2	Immature	2.20	1.90	0.55	1.30	0.50	1.55
17-Jul-20	#2	Immature	2.20	1.90	0.40	1.30	0.40	1.35
17-Jul-20	#2	Immature	2.20	1.90	0.60	1.35	0.55	1.40
17-Jul-20	#2	Immature	2.20	1.90	0.55	1.20	0.55	1.40
17-Jul-20	#2	Immature	2.20	1.95	0.55	1.40	0.50	1.20
17-Jul-20	#2	Immature	2.20	2.10	0.55	1.30	0.60	1.50
17-Jul-20	#2	Immature	2.20	1.80	0.45	1.20	0.50	1.20
17-Jul-20	#2	Immature	2.20	1.80	0.50	1.30	0.70	1.40
17-Jul-20	#2	Immature	2.20	1.90	0.55	1.20	0.60	1.30
17-Jul-20	#2	Immature	2.15	1.80	0.45	1.20	0.50	1.35
17-Jul-20	#2	Immature	2.15	1.95	0.60	1.40	0.60	1.45
17-Jul-20	#2	Immature	2.15	2.10	0.60	1.45	0.65	1.50
17-Jul-20	#2	Immature	2.15	1.80	0.50	1.20	0.50	1.25
17-Jul-20	#2	Immature	2.15	2.10	0.55	1.10	0.60	1.10
17-Jul-20	#2	Immature	2.15	2.10	0.70	1.60	0.70	1.60
17-Jul-20	#2	Immature	2.10	1.95	-	-	-	-
17-Jul-20	#2	Immature	2.10	1.90	0.50	1.25	-	-
17-Jul-20	#2	Immature	2.10	1.90	0.50	1.50	0.60	1.50
17-Jul-20	#2	Immature	2.10	1.90	0.55	1.20	0.60	1.25
17-Jul-20	#2	Immature	2.05	1.75	0.50	1.10	0.30	0.90
17-Jul-20	#2	Immature	2.05	1.85	0.50	1.20	0.60	1.45
17-Jul-20	#2	Immature	2.00	1.85	0.50	1.40	1.60	1.45
17-Jul-20	#2	Immature	2.00	1.70	0.50	1.10	0.50	1.10
17-Jul-20	#2	Immature	2.00	2.00	0.45	1.20	0.45	1.20
17-Jul-20	#2	Immature	2.00	2.05	0.50	1.40	0.60	1.60
17-Jul-20	#2	Immature	1.95	1.50	-	-	0.50	1.15

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Jul-20	#2	Immature	1.80	1.55	0.35	1.00	0.45	1.00
17-Jul-20	#2	Immature	1.80	1.50	0.35	0.95	0.40	1.00
17-Jul-20	#2	Immature	1.80	1.50	0.35	0.90	0.40	1.00
17-Jul-20	#2	Immature	1.80	1.55	0.45	1.00	0.45	1.00
17-Jul-20	#2	Immature	1.80	1.45	0.45	1.00	0.40	0.90
17-Jul-20	#2	Immature	1.75	1.45	0.30	1.10	0.40	0.75
17-Jul-20	#2	Immature	1.75	1.45	-	-	0.40	0.90
17-Jul-20	#2	Immature	1.70	1.45	0.40	0.95	0.35	1.10
17-Jul-20	#2	Immature	1.65	1.50	0.40	1.00	0.40	1.00
17-Jul-20	#2	Immature	1.60	1.40	0.45	1.00	0.40	1.00
17-Jul-20	#2	Immature	1.60	1.55	-	-	-	-
17-Jul-20	#2	Immature	1.55	1.60	-	-	0.30	1.00
17-Jul-20	#2	Immature	1.35	1.20	0.30	0.80	0.25	0.75
17-Jul-20	#2	-	-	-	1.50	0.65	1.60	0.70
17-Jul-20	#2	-	-	-	0.90	1.80	0.50	1.50
17-Jul-20	#2	-	-	-	0.80	1.60	0.90	1.80
17-Jul-20	#2	-	-	-	0.70	1.50	0.80	1.75
17-Jul-20	#3	Male	-	-	1.70	3.50	-	-
17-Jul-20	#3	Male	12.50	9.00	4.10	9.15	5.80	10.10
17-Jul-20	#3	Male	10.90	8.25	3.30	7.60	4.00	8.60
17-Jul-20	#3	Male	10.00	7.50	4.15	6.15	4.10	7.40
17-Jul-20	#3	Male	9.30	7.00	2.70	6.20	3.60	7.00
17-Jul-20	#3	Male	9.00	6.80	3.00	6.50	3.80	6.80
17-Jul-20	#3	Female	8.90	6.50	2.25	5.90	2.30	5.90
17-Jul-20	#3	Female	8.20	6.00	2.20	4.80	2.80	5.65
17-Jul-20	#3	Female	7.80	5.90	1.90	4.75	2.25	5.20
17-Jul-20	#3	Female	7.35	5.50	2.00	4.80	2.30	5.00
17-Jul-20	#3	Female	7.30	5.50	1.80	4.80	2.00	4.80
17-Jul-20	#3	Female	7.25	5.50	1.55	3.80	2.00	4.80
17-Jul-20	#3	Male	7.25	5.65	1.90	4.90	2.40	5.00
17-Jul-20	#3	Female	7.00	5.00	1.80	4.10	2.10	4.65
17-Jul-20	#3	Male	6.90	5.35	1.65	3.90	2.25	4.30
17-Jul-20	#3	Female	6.80	5.15	1.90	4.30	2.30	4.50
17-Jul-20	#3	Male	6.80	5.20	1.95	4.55	2.30	4.90
17-Jul-20	#3	Male	6.80	5.20	2.00	4.40	2.10	4.70
17-Jul-20	#3	Male	6.65	5.10	1.90	4.40	2.20	4.60
17-Jul-20	#3	Male	6.60	5.20	1.80	4.00	2.20	4.30
17-Jul-20	#3	Male	6.60	5.10	2.10	4.40	2.50	5.00
17-Jul-20	#3	Male	6.55	4.90	1.99	4.05	2.10	4.50
17-Jul-20	#3	Male	6.50	5.00	1.90	4.00	2.00	4.40
17-Jul-20	#3	Male	6.40	5.00	1.80	4.00	2.00	4.10

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Jul-20	#3	Male	6.30	4.70	1.95	4.00	2.20	4.45
17-Jul-20	#3	Male	6.20	4.55	1.70	4.10	1.90	4.40
17-Jul-20	#3	Male	6.00	4.70	1.70	3.80	2.00	3.85
17-Jul-20	#3	-	5.95	4.50	-	-	-	-
17-Jul-20	#3	Female	5.90	4.60	1.35	3.40	1.90	3.80
17-Jul-20	#3	Female	5.80	4.40	1.60	3.50	1.90	3.80
17-Jul-20	#3	Male	5.80	4.50	1.55	3.50	1.70	3.70
17-Jul-20	#3	Female	5.50	4.35	1.40	3.30	1.80	3.80
17-Jul-20	#3	Male	5.50	3.30	1.10	2.70	1.30	3.50
17-Jul-20	#3	Female	5.40	4.15	-	-	-	-
17-Jul-20	#3	Female	5.40	4.40	-	-	1.40	3.10
17-Jul-20	#3	Female	5.25	4.10	1.40	3.10	1.50	3.10
17-Jul-20	#3	Female	5.05	3.90	1.25	3.00	-	-
17-Jul-20	#3	Male	5.00	4.00	1.30	2.80	-	-
17-Jul-20	#3	Male	4.90	3.90	1.40	3.10	1.60	3.80
17-Jul-20	#3	Male	4.90	3.40	1.20	2.70	1.20	2.85
17-Jul-20	#3	Female	4.80	3.50	1.20	2.60	1.25	3.00
17-Jul-20	#3	Female	4.70	3.80	1.20	2.75	1.40	3.00
17-Jul-20	#3	Male	4.70	3.30	1.30	2.80	-	-
17-Jul-20	#3	Male	4.65	4.00	1.40	3.10	1.30	3.10
17-Jul-20	#3	Female	4.60	3.60	1.10	2.70	1.30	2.80
17-Jul-20	#3	Female	4.60	3.60	-	-	1.40	2.80
17-Jul-20	#3	Female	4.60	3.70	1.25	2.90	1.50	3.20
17-Jul-20	#3	Female	4.55	3.50	1.20	2.90	1.50	2.90
17-Jul-20	#3	Male	4.50	3.50	1.25	2.80	1.40	3.00
17-Jul-20	#3	Male	4.35	3.45	1.10	2.70	1.30	2.75
17-Jul-20	#3	Female	4.30	3.50	1.20	2.60	1.35	2.65
17-Jul-20	#3	Male	4.20	3.30	1.10	2.40	1.40	2.70
17-Jul-20	#3	Male	4.20	3.20	1.10	2.40	1.40	2.80
17-Jul-20	#3	Female	4.15	3.40	1.00	2.40	1.00	2.40
17-Jul-20	#3	-	4.10	2.90	1.00	2.40	-	-
17-Jul-20	#3	Male	4.10	3.30	1.10	2.55	1.30	2.60
17-Jul-20	#3	Male	4.10	3.25	1.00	2.20	1.00	2.30
17-Jul-20	#3	Male	4.05	3.15	1.05	2.40	1.10	2.70
17-Jul-20	#3	Male	4.00	3.20	1.00	2.50	1.30	2.50
17-Jul-20	#3	Immature	3.90	3.25	1.00	2.30	1.00	2.35
17-Jul-20	#3	Immature	3.80	2.95	1.00	2.20	1.10	2.30
17-Jul-20	#3	Immature	3.80	2.90	1.00	2.25	1.00	2.10
17-Jul-20	#3	Immature	3.75	3.05	1.10	2.30	1.20	2.70
17-Jul-20	#3	Immature	3.55	3.00	0.80	1.90	-	-
17-Jul-20	#3	Immature	3.50	2.80	1.00	2.00	0.85	2.10

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Jul-20	#3	Immature	3.30	2.90	1.00	2.20	0.95	2.10
17-Jul-20	#3	Immature	3.30	2.75	0.85	1.90	1.00	2.00
17-Jul-20	#3	Immature	3.20	2.40	0.60	1.60	0.90	2.10
17-Jul-20	#3	Immature	3.20	2.60	0.70	2.00	0.80	2.00
17-Jul-20	#3	Immature	3.20	2.60	0.90	1.80	0.90	1.85
17-Jul-20	#3	Immature	3.10	2.80	0.75	1.70	0.85	2.00
17-Jul-20	#3	Immature	3.05	2.30	0.80	1.80	0.80	1.90
17-Jul-20	#3	Immature	3.00	2.60	0.70	1.80	0.90	2.00
17-Jul-20	#3	Immature	3.00	2.50	0.85	1.90	0.80	1.80
17-Jul-20	#3	Immature	2.90	2.40	0.75	1.60	0.80	1.70
17-Jul-20	#3	Immature	2.60	2.30	0.65	1.50	0.80	1.50
17-Jul-20	#3	Immature	2.60	2.20	0.60	1.40	0.70	1.40
17-Jul-20	#3	Immature	2.35	2.05	0.55	1.20	0.55	1.50
17-Jul-20	#3	Immature	2.30	2.00	0.70	1.30	0.70	1.50
17-Jul-20	#3	Immature	2.20	1.80	0.60	1.30	-	-
17-Jul-20	#3	Immature	2.00	1.70	-	-	0.60	1.30
17-Jul-20	#3	Immature	1.90	1.70	0.40	1.05	0.45	1.10
17-Jul-20	#3	Immature	1.80	0.60	0.45	1.30	0.50	1.20
17-Jul-20	#3	Immature	1.80	0.70	0.75	1.80	0.80	1.80
17-Jul-20	#4	Male	5.70	4.75	1.60	3.60	1.80	3.30
17-Jul-20	#4	Male	5.30	4.30	1.40	3.40	1.90	3.30
17-Jul-20	#4	Female	4.80	4.10	1.30	3.20	1.50	3.20
17-Jul-20	#4	Immature	3.00	2.60	1.00	2.20	0.90	2.20
17-Jul-20	#5	Female	8.90	7.55	2.2	5.30	3.00	5.80
17-Jul-20	#5	Female	7.30	5.50	1.70	4.40	2.50	4.80
17-Jul-20	#5	Female	5.40	4.30	-	-	1.55	3.50
17-Jul-20	#5	Female	5.10	4.00	1.35	2.80	1.50	3.20
17-Jul-20	#5	Female	5.05	3.80	1.20	2.90	1.30	2.75
17-Jul-20	#5	Female	4.70	3.60	1.30	2.60	1.30	2.80
17-Jul-20	#5	Immature	3.60	2.80	1.00	1.90	1.10	2.30
17-Jul-20	#5	Immature	3.50	3.00	0.90	2.30	0.90	2.65
17-Jul-20	#5	Immature	3.40	2.80	0.80	2.10	1.00	2.15
17-Jul-20	#6	Male	7.55	5.75	2.30	4.90	3.00	5.70
17-Jul-20	#6	Male	7.50	5.75	2.25	4.90	2.60	5.30
17-Jul-20	#6	Male	6.70	5.15	1.80	4.10	2.45	4.70
17-Jul-20	#6	Female	6.55	5.05	1.70	3.70	1.90	4.20
17-Jul-20	#6	Female	6.10	4.70	-	-	1.90	4.15
17-Jul-20	#6	Male	6.10	4.60	1.70	3.60	-	-
17-Jul-20	#6	Female	6.05	4.50	1.70	3.35	1.90	3.80
17-Jul-20	#6	Female	5.85	4.55	1.25	3.30	1.60	3.50
17-Jul-20	#6	Female	5.65	4.50	1.70	3.45	1.85	3.90

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Jul-20	#6	Male	5.30	4.10	1.55	3.10	1.60	3.40
17-Jul-20	#6	Female	5.00	3.90	1.30	3.00	1.50	3.20
17-Jul-20	#6	Female	4.85	3.70	1.20	2.95	1.25	3.15
17-Jul-20	#6	Male	4.40	3.50	1.20	2.70	1.30	2.70
17-Jul-20	#6	Female	4.25	3.55	1.20	2.25	1.20	2.65
17-Jul-20	#6	Male	4.20	3.20	1.00	2.50	1.10	2.50
17-Jul-20	#6	Female	4.15	3.35	1.00	2.20	1.05	2.50
17-Jul-20	#6	Female	4.10	3.25	1.10	2.50	1.20	2.50
17-Jul-20	#6	Female	4.10	3.30	1.00	2.20	1.10	2.50
17-Jul-20	#6	Male	4.10	3.25	1.00	2.55	1.20	2.70
17-Jul-20	#6	Male	4.10	3.25	1.10	2.30	1.30	2.50
17-Jul-20	#6	Male	4.05	3.40	1.15	2.50	1.30	2.65
17-Jul-20	#6	Female	4.00	3.15	1.00	2.40	1.10	2.40
17-Jul-20	#6	Immature	3.85	3.20	1.00	2.30	1.15	2.50
17-Jul-20	#6	Immature	3.80	3.10	1.05	2.50	-	-
17-Jul-20	#6	Immature	3.80	3.15	0.90	2.25	1.00	2.30
17-Jul-20	#6	Immature	3.80	3.00	1.00	2.30	1.10	2.30
17-Jul-20	#6	Immature	3.00	2.45	0.75	1.70	0.90	1.80
17-Jul-20	#6	Immature	2.90	2.35	0.75	1.55	0.80	1.65
17-Jul-20	#6	Immature	2.85	2.30	0.60	1.60	0.70	1.65
17-Jul-20	#6	Immature	2.80	2.25	0.50	1.30	0.70	1.60
17-Jul-20	#6	Immature	2.60	1.25	1.25	2.70	1.40	2.85
17-Jul-20	#6	Immature	2.55	2.10	0.65	1.55	0.60	1.50
17-Jul-20	#6	Immature	2.50	1.20	1.10	2.60	1.20	2.80
17-Jul-20	#6	Immature	2.50	2.30	0.70	1.20	0.80	1.40
17-Jul-20	#6	Immature	2.40	1.90	0.60	1.40	0.50	1.40
17-Jul-20	#6	Immature	1.90	1.70	0.35	1.10	0.50	1.15
14-Aug-20	#1	Male	11.30	8.10	3.45	8.30	4.45	8.90
14-Aug-20	#1	Male	11.10	8.20	3.60	7.45	4.80	9.40
14-Aug-20	#1	Male	10.50	7.85	3.30	7.55	3.60	7.90
14-Aug-20	#1	Male	8.30	6.45	2.40	5.60	2.70	5.75
14-Aug-20	#1	Female	8.00	6.00	1.70	4.10	2.00	4.30
14-Aug-20	#1	Male	7.00	5.50	2.00	4.40	2.25	4.40
14-Aug-20	#1	Male	7.00	5.50	2.00	4.10	2.20	4.90
14-Aug-20	#1	Female	6.60	4.95	2.00	4.20	1.45	3.75
14-Aug-20	#1	Male	5.90	4.90	1.85	3.70	1.40	3.00
14-Aug-20	#1	Male	5.75	4.40	1.50	3.30	1.70	3.50
14-Aug-20	#2	Male	12.30	8.90	3.50	8.40	4.75	9.80
14-Aug-20	#2	Female	10.30	7.90	2.75	6.20	3.30	6.50
14-Aug-20	#2	Male	10.30	8.00	3.30	7.80	3.80	7.80
14-Aug-20	#2	Male	10.20	7.80	3.80	7.90	2.60	6.30

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
14-Aug-20	#2	Male	10.20	7.65	3.30	7.20	3.70	8.30
14-Aug-20	#2	Female	9.85	7.50	3.15	6.60	2.50	6.00
14-Aug-20	#2	Female	9.55	7.20	2.45	5.60	3.20	6.50
14-Aug-20	#2	Male	8.50	6.70	2.70	5.75	3.55	6.10
14-Aug-20	#2	Female	6.90	5.40	2.00	4.20	2.30	4.50
14-Aug-20	#3	Female	10.05	7.35	2.75	6.20	3.10	6.50
14-Aug-20	#3	Male	13.40	8.90	4.00	9.50	5.30	10.50
14-Aug-20	#3	Male	13.15	9.25	4.20	8.80	4.90	9.70
14-Aug-20	#3	Male	13.10	9.75	4.55	9.70	5.65	10.80
14-Aug-20	#3	Male	13.00	9.50	4.40	9.60	5.15	11.60
14-Aug-20	#3	Male	12.10	8.90	4.00	9.15	4.80	9.60
14-Aug-20	#3	Male	12.00	8.60	3.80	8.20	4.80	9.10
14-Aug-20	#3	Male	11.60	8.80	4.05	8.90	5.10	9.90
14-Aug-20	#3	Male	11.50	8.15	3.35	8.35	4.15	9.50
14-Aug-20	#3	Female	10.80	8.00	3.05	6.30	3.30	6.80
14-Aug-20	#3	Male	10.80	8.15	4.35	8.90	3.30	7.30
14-Aug-20	#3	Male	10.70	7.85	3.45	7.50	4.20	8.05
14-Aug-20	#3	Female	10.65	8.10	2.60	6.20	2.85	6.45
14-Aug-20	#3	Female	10.50	7.80	3.10	6.65	3.25	7.00
14-Aug-20	#3	Male	10.50	7.70	3.35	7.50	4.20	8.90
14-Aug-20	#3	Female	10.15	7.55	2.65	6.50	3.20	6.60
14-Aug-20	#3	Male	10.10	7.75	3.30	7.30	3.75	7.70
14-Aug-20	#3	Male	9.90	7.40	3.20	6.75	4.05	7.90
14-Aug-20	#3	Male	9.80	7.15	3.15	6.70	3.50	7.10
14-Aug-20	#3	Male	9.65	7.25	2.40	5.20	3.75	7.00
14-Aug-20	#3	Female	9.60	7.20	2.45	6.00	-	-
14-Aug-20	#3	Female	9.55	7.10	2.15	5.50	3.25	6.30
14-Aug-20	#3	Male	9.50	7.15	2.90	6.10	3.45	7.00
14-Aug-20	#3	Male	9.45	7.20	2.90	6.40	3.15	7.10
14-Aug-20	#3	Female	9.30	7.00	2.50	4.40	2.70	5.70
14-Aug-20	#3	Female	9.20	7.00	2.35	5.55	2.90	6.45
14-Aug-20	#3	Female	9.05	7.00	2.50	5.30	3.25	6.20
14-Aug-20	#3	Female	9.00	6.50	1.95	4.65	2.15	5.60
14-Aug-20	#3	Female	8.95	6.70	2.50	5.60	3.00	5.80
14-Aug-20	#3	Male	8.90	6.50	2.75	5.30	3.20	6.60
14-Aug-20	#3	Female	8.85	6.75	2.30	4.85	2.35	5.50
14-Aug-20	#3	Male	8.85	6.65	2.70	5.80	3.00	6.55
14-Aug-20	#3	Female	8.80	6.70	2.10	5.10	2.65	6.00
14-Aug-20	#3	Female	8.70	6.70	2.45	5.50	2.30	5.80
14-Aug-20	#3	Female	8.60	6.25	2.20	5.40	3.10	5.75
14-Aug-20	#3	Female	8.50	6.15	-	-	2.40	5.10

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
14-Aug-20	#3	Female	8.45	6.40	2.25	5.20	2.60	5.45
14-Aug-20	#3	Male	8.45	6.65	2.75	6.00	2.80	6.30
14-Aug-20	#3	Male	8.40	6.35	2.50	6.75	2.90	6.70
14-Aug-20	#3	Female	8.35	6.20	2.25	5.10	2.50	5.80
14-Aug-20	#3	Female	8.30	6.30	2.00	5.00	2.20	5.30
14-Aug-20	#3	Female	8.20	6.30	2.35	4.50	2.60	5.00
14-Aug-20	#3	Female	8.15	6.25	2.30	5.40	2.20	5.60
14-Aug-20	#3	Female	8.00	6.15	2.00	4.60	2.10	4.70
14-Aug-20	#3	Female	8.00	6.05	2.10	5.30	2.35	4.90
14-Aug-20	#3	Female	8.00	6.30	2.20	5.00	2.30	5.20
14-Aug-20	#3	Female	8.00	6.00	2.10	4.65	2.70	5.00
14-Aug-20	#3	Male	8.00	6.00	2.00	4.80	2.25	5.60
14-Aug-20	#3	Male	8.00	6.00	2.30	5.00	2.70	5.80
14-Aug-20	#3	Male	8.00	6.10	2.20	5.10	2.40	5.55
14-Aug-20	#3	Male	7.89	6.00	2.20	5.00	2.90	6.00
14-Aug-20	#3	Male	7.80	6.00	2.20	5.00	2.70	5.60
14-Aug-20	#3	Female	7.70	6.60	2.05	4.60	2.20	4.45
14-Aug-20	#3	Female	7.70	5.90	2.10	4.20	2.75	5.20
14-Aug-20	#3	Female	7.70	5.45	1.85	4.40	2.20	5.90
14-Aug-20	#3	Female	7.50	5.40	1.90	4.25	2.05	4.90
14-Aug-20	#3	Female	7.50	5.80	2.00	4.20	2.20	4.60
14-Aug-20	#3	Male	7.50	5.70	2.40	5.20	2.60	5.70
14-Aug-20	#3	Female	7.40	5.70	1.90	3.95	2.00	4.60
14-Aug-20	#3	Male	7.40	5.60	2.05	5.00	2.40	5.40
14-Aug-20	#3	Male	7.30	5.35	-	-	-	-
14-Aug-20	#3	Male	7.30	5.60	2.20	4.70	2.50	5.10
14-Aug-20	#3	Female	7.20	5.40	1.80	4.35	2.10	4.50
14-Aug-20	#3	Female	7.20	5.65	2.00	4.35	1.90	4.85
14-Aug-20	#3	Male	7.20	5.60	2.05	4.10	2.10	5.00
14-Aug-20	#3	Female	7.15	5.40	1.70	4.30	2.15	4.40
14-Aug-20	#3	Female	7.10	5.35	2.00	4.50	2.10	4.50
14-Aug-20	#3	Male	7.10	5.20	2.00	4.25	2.30	4.80
14-Aug-20	#3	Female	7.00	5.25	1.80	4.00	1.90	4.00
14-Aug-20	#3	Female	7.00	5.30	1.85	4.20	1.75	4.30
14-Aug-20	#3	Male	6.95	5.15	1.80	4.00	2.00	4.20
14-Aug-20	#3	Female	6.90	5.10	1.80	4.20	2.00	4.35
14-Aug-20	#3	Male	6.80	5.25	1.80	4.20	2.20	4.80
14-Aug-20	#3	Female	6.75	5.00	1.70	4.10	2.10	4.20
14-Aug-20	#3	Male	6.75	5.00	2.20	4.40	1.60	4.20
14-Aug-20	#3	Female	6.70	5.00	1.75	4.00	1.95	4.10
14-Aug-20	#3	Female	6.70	5.05	1.70	3.85	1.90	4.35

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
14-Aug-20	#3	Female	6.60	4.90	1.70	3.90	1.70	4.20
14-Aug-20	#3	Female	6.60	5.00	1.90	4.00	1.40	3.90
14-Aug-20	#3	Male	6.60	5.05	1.85	4.15	1.90	4.30
14-Aug-20	#3	Female	6.50	6.50	2.30	5.00	2.35	5.05
14-Aug-20	#3	Female	6.50	5.00	1.60	3.85	1.80	3.80
14-Aug-20	#3	Female	6.50	4.90	1.70	3.80	1.80	3.80
14-Aug-20	#3	Female	6.30	4.90	1.40	6.55	1.80	3.75
14-Aug-20	#3	Male	6.30	4.70	1.55	3.80	1.80	3.90
14-Aug-20	#3	Male	6.30	4.80	1.70	3.65	1.80	4.25
14-Aug-20	#3	Female	6.25	4.70	1.65	3.80	2.00	4.10
14-Aug-20	#3	Male	6.20	4.40	1.70	3.65	2.10	4.15
14-Aug-20	#3	Male	6.20	4.70	1.60	3.80	1.90	3.90
14-Aug-20	#3	Female	6.10	4.55	1.60	3.70	1.80	3.80
14-Aug-20	#3	Female	6.00	4.50	1.50	3.30	1.70	3.55
14-Aug-20	#3	Male	6.00	4.60	1.65	3.60	1.80	4.00
14-Aug-20	#3	Male	6.00	4.80	1.80	4.00	1.90	4.20
14-Aug-20	#3	Female	5.85	4.60	1.80	3.60	1.30	3.20
14-Aug-20	#3	Female	5.70	4.50	1.50	3.20	1.60	3.50
14-Aug-20	#3	Male	5.70	4.30	1.50	3.50	1.90	3.80
14-Aug-20	#3	Male	5.70	4.50	1.70	3.60	1.80	3.70
14-Aug-20	#3	Female	5.60	4.10	-	-	-	-
14-Aug-20	#3	Male	5.60	4.30	1.40	3.35	1.50	3.40
14-Aug-20	#3	Male	5.50	4.30	1.50	3.50	1.85	4.00
14-Aug-20	#3	Female	5.45	4.10	1.30	3.30	1.30	3.30
14-Aug-20	#3	Male	5.40	4.20	1.50	3.60	1.85	3.65
14-Aug-20	#3	Female	5.35	3.85	1.20	3.25	-	-
14-Aug-20	#3	-	5.00	3.85	1.10	2.85	1.50	2.90
14-Aug-20	#3	-	5.00	3.70	1.20	3.00	1.55	3.00
14-Aug-20	#3	Female	5.00	3.80	1.30	2.75	1.30	2.80
14-Aug-20	#3	Male	5.00	3.90	1.30	3.05	1.50	3.10
14-Aug-20	#3	Male	5.00	3.40	1.10	2.60	1.30	2.80
14-Aug-20	#3	-	4.90	3.70	1.40	3.00	1.10	2.50
14-Aug-20	#3	Male	4.85	4.50	1.50	3.50	1.85	3.80
14-Aug-20	#3	Male	4.80	3.70	1.15	2.70	1.55	3.00
14-Aug-20	#3	-	4.70	3.50	1.15	2.80	1.50	2.85
14-Aug-20	#3	Male	4.55	4.05	1.25	2.90	1.30	2.95
14-Aug-20	#3	-	4.40	3.45	1.30	2.65	1.00	2.50
14-Aug-20	#3	-	4.40	3.30	1.05	2.55	1.20	2.70
14-Aug-20	#3	-	4.30	3.30	0.95	2.30	-	-
14-Aug-20	#3	-	4.25	3.20	-	-	1.10	2.75
14-Aug-20	#3	Female	4.25	3.20	1.10	2.45	-	-

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
14-Aug-20	#3	-	4.20	3.50	-	-	-	-
14-Aug-20	#3	Female	4.20	3.20	0.95	2.40	1.10	2.45
14-Aug-20	#3	Female	4.20	3.20	1.05	2.20	1.30	2.50
14-Aug-20	#3	Male	4.10	3.10	1.10	2.50	1.30	2.50
14-Aug-20	#3	-	4.00	3.00	0.90	2.20	1.00	2.50
14-Aug-20	#3	-	4.00	3.20	1.00	2.25	1.50	2.50
14-Aug-20	#3	Male	4.00	3.40	1.40	2.80	1.10	2.50
14-Aug-20	#3	Immature	3.90	3.20	0.90	2.10	0.95	2.20
14-Aug-20	#3	Immature	3.80	2.90	0.90	2.20	1.10	2.20
14-Aug-20	#3	Immature	3.75	3.20	0.90	2.25	0.90	2.65
14-Aug-20	#3	Immature	3.70	2.90	1.00	2.10	0.85	2.10
14-Aug-20	#3	Immature	3.65	2.80	1.00	2.00	0.65	2.00
14-Aug-20	#3	Immature	3.60	2.90	0.70	1.90	0.85	2.00
14-Aug-20	#3	Immature	3.60	2.65	0.90	1.90	0.90	2.20
14-Aug-20	#3	Immature	3.50	2.55	0.80	2.00	0.80	2.00
14-Aug-20	#3	Immature	3.40	2.85	0.90	2.00	0.80	1.90
14-Aug-20	#3	Immature	3.30	2.60	0.80	1.80	0.90	2.10
14-Aug-20	#3	Immature	3.20	2.60	0.65	1.85	0.85	1.90
14-Aug-20	#3	Immature	3.20	2.60	0.90	2.10	1.00	2.20
14-Aug-20	#3	Immature	2.80	2.50	0.55	1.50	0.55	1.50
14-Aug-20	#3	Immature	2.70	2.20	0.70	1.60	0.75	1.60
14-Aug-20	#3	Immature	2.50	2.25	0.60	1.50	0.70	1.50
14-Aug-20	#4	Male	13.80	10.10	4.50	9.70	5.50	11.80
14-Aug-20	#4	Male	11.00	8.00	3.60	7.80	3.10	6.40
14-Aug-20	#4	Male	10.70	8.20	3.55	8.00	-	-
14-Aug-20	#4	Female	10.60	8.00	6.80	3.80	5.80	2.70
14-Aug-20	#4	Female	10.00	7.40	3.45	6.90	2.60	5.70
14-Aug-20	#4	Male	9.60	7.20	2.85	6.00	3.50	7.30
14-Aug-20	#4	Male	8.50	6.30	2.50	5.70	2.80	5.70
14-Aug-20	#4	Male	7.80	5.90	2.20	5.00	2.10	5.20
14-Aug-20	#4	Female	7.65	5.80	2.00	4.50	2.30	5.40
14-Aug-20	#4	Male	7.00	5.10	2.00	4.30	2.30	4.80
14-Aug-20	#4	Male	6.80	5.20	1.80	4.30	2.30	4.70
14-Aug-20	#4	Male	5.80	4.40	1.50	3.60	1.90	4.00
14-Aug-20	#4	Male	4.85	3.60	1.05	2.90	1.45	2.80
14-Aug-20	#5	Male	8.60	6.70	2.40	5.60	3.00	6.20
14-Aug-20	#5	Male	5.00	3.90	1.20	2.90	1.40	3.00
14-Aug-20	#5	Female	4.00	3.15	0.95	2.30	1.30	2.50
14-Aug-20	#5	Immature	3.75	2.80	1.00	1.95	1.15	2.35
14-Aug-20	#5	Male	11.15	8.15	3.60	7.60	4.35	8.50
14-Aug-20	#5	Male	10.30	7.90	3.40	7.25	4.00	8.30

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
14-Aug-20	#5	Female	7.00	5.35	1.80	4.40	2.00	4.50
14-Aug-20	#5	Female	6.60	4.80	1.70	3.60	1.70	3.90
14-Aug-20	#5	Male	5.70	4.10	-	-	-	-
14-Aug-20	#5	Male	5.60	4.20	1.70	3.50	1.30	3.30
14-Aug-20	#5	-	4.00	3.25	1.10	2.25	1.20	2.75
14-Aug-20	#5	Immature	2.70	2.20	0.60	1.50	0.80	1.65
14-Aug-20	#6	Female	9.40	6.90	2.45	5.90	2.50	5.90
14-Aug-20	#6	Female	8.35	6.10	2.20	4.80	2.50	5.30
14-Aug-20	#6	Female	13.20	9.40	3.25	7.00	-	-
14-Aug-20	#6	Male	12.45	9.10	4.30	9.00	4.90	11.30
14-Aug-20	#6	Male	12.40	9.00	3.90	8.80	5.10	9.50
14-Aug-20	#6	Male	12.00	8.80	3.90	8.50	4.70	9.80
14-Aug-20	#6	Male	11.50	8.60	4.35	8.40	2.50	6.10
14-Aug-20	#6	Male	11.40	7.85	3.30	7.65	4.20	8.90
14-Aug-20	#6	Male	11.10	8.25	3.20	8.15	4.60	9.00
14-Aug-20	#6	Female	10.80	7.20	-	-	-	-
14-Aug-20	#6	Male	10.60	8.10	3.50	8.00	-	-
14-Aug-20	#6	Male	10.20	7.50	3.25	6.80	4.00	7.35
14-Aug-20	#6	Male	10.00	7.75	3.20	7.15	3.80	7.90
14-Aug-20	#6	Female	9.80	7.20	2.50	5.90	2.80	6.40
14-Aug-20	#6	Female	9.70	7.20	2.60	5.95	3.00	6.30
14-Aug-20	#6	Female	9.50	7.35	2.50	5.80	2.80	6.10
14-Aug-20	#6	Male	9.50	7.55	3.00	6.70	3.70	7.80
14-Aug-20	#6	Female	9.40	7.00	-	-	-	-
14-Aug-20	#6	Male	9.40	7.30	2.80	6.10	3.80	6.80
14-Aug-20	#6	Male	9.35	7.00	2.80	6.10	3.30	7.00
14-Aug-20	#6	Female	9.25	7.10	2.30	5.75	2.60	5.80
14-Aug-20	#6	Male	9.00	6.70	2.70	5.80	3.20	6.50
14-Aug-20	#6	Female	8.90	6.50	2.50	5.45	-	-
14-Aug-20	#6	Female	8.75	6.60	2.50	5.40	3.00	5.65
14-Aug-20	#6	Female	8.70	6.70	2.30	5.30	2.70	6.60
14-Aug-20	#6	Female	8.60	6.20	2.45	5.00	2.80	5.60
14-Aug-20	#6	Male	8.60	6.40	2.35	5.50	-	-
14-Aug-20	#6	Female	8.50	6.50	2.50	4.75	2.40	5.40
14-Aug-20	#6	Female	8.40	6.10	2.00	5.00	2.40	5.20
14-Aug-20	#6	Male	8.40	6.00	2.20	5.55	3.15	6.60
14-Aug-20	#6	Male	8.30	6.10	2.20	5.20	3.00	5.35
14-Aug-20	#6	Female	8.10	6.00	2.25	4.80	2.80	5.30
14-Aug-20	#6	Female	8.10	6.00	2.20	4.70	2.60	5.50
14-Aug-20	#6	Female	8.00	6.00	2.20	4.75	2.60	5.20
14-Aug-20	#6	Female	8.00	5.40	2.00	4.50	2.20	4.50

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
14-Aug-20	#6	Female	7.90	5.95	2.00	4.20	2.30	4.65
14-Aug-20	#6	Male	7.80	5.90	2.80	5.30	2.10	4.50
14-Aug-20	#6	Male	7.70	5.65	2.20	4.80	1.50	3.90
14-Aug-20	#6	Male	7.70	5.90	2.10	4.90	2.30	5.20
14-Aug-20	#6	Female	7.60	5.90	-	-	2.35	5.25
14-Aug-20	#6	Male	7.60	5.80	1.95	4.80	2.50	5.20
14-Aug-20	#6	Female	7.50	5.50	1.90	3.95	2.10	4.40
14-Aug-20	#6	Female	7.50	5.75	1.90	4.80	2.50	5.20
14-Aug-20	#6	Female	7.50	5.35	2.00	4.10	2.40	5.00
14-Aug-20	#6	Female	7.40	5.50	1.75	4.50	2.10	4.55
14-Aug-20	#6	Female	7.30	5.35	2.00	4.20	2.35	4.70
14-Aug-20	#6	Female	7.30	5.60	2.30	4.40	1.80	4.10
14-Aug-20	#6	Male	7.30	5.60	2.00	4.30	2.10	4.90
14-Aug-20	#6	Male	7.00	5.25	1.90	4.30	2.20	4.75
14-Aug-20	#6	Male	6.90	5.35	1.90	4.40	2.10	4.70
14-Aug-20	#6	Female	6.80	5.10	1.80	3.80	2.10	4.00
14-Aug-20	#6	Female	6.70	4.75	1.80	3.85	1.90	4.10
14-Aug-20	#6	Male	6.60	4.70	-	-	1.85	4.35
14-Aug-20	#6	Female	6.50	4.90	-	-	2.00	4.20
14-Aug-20	#6	Male	6.30	4.60	2.05	4.00	1.50	3.80
14-Aug-20	#6	Female	6.25	4.90	1.85	3.90	1.40	3.70
14-Aug-20	#6	Male	6.20	4.85	1.70	4.00	1.70	4.10
14-Aug-20	#6	Female	6.15	4.70	1.60	3.50	1.75	3.60
14-Aug-20	#6	Male	6.10	4.70	1.70	3.60	1.90	3.80
14-Aug-20	#6	Female	6.00	4.00	1.60	3.70	1.60	3.80
14-Aug-20	#6	Male	6.00	4.60	1.70	3.90	1.40	3.50
14-Aug-20	#6	Female	5.90	4.50	1.45	3.35	1.70	3.55
14-Aug-20	#6	Female	5.80	4.30	1.70	3.50	-	-
14-Aug-20	#6	Female	5.70	4.40	1.60	3.50	1.40	3.25
14-Aug-20	#6	Male	5.40	4.00	1.45	3.10	1.55	3.30
14-Aug-20	#6	Male	5.40	4.15	1.50	3.30	1.60	3.30
14-Aug-20	#6	Female	5.30	4.00	1.40	3.30	-	-
14-Aug-20	#6	Male	4.50	3.60	1.20	2.55	1.40	2.70
14-Aug-20	#6	Immature	3.40	2.60	-	-	0.90	1.85
14-Aug-20	#6	Immature	3.30	2.70	0.80	2.05	1.00	2.00
14-Aug-20	#6	Immature	3.20	2.70	-	-	0.90	1.90
14-Aug-20	#6	Immature	3.05	2.50	0.80	1.90	0.80	1.90
14-Aug-20	#6	Immature	2.90	2.50	-	-	0.85	1.75
14-Aug-20	#6	Immature	2.30	2.05	0.65	1.35	1.75	1.45
14-Aug-20	#6	Immature	2.30	1.90	0.60	1.40	0.65	1.45
14-Aug-20	#6	Immature	2.15	1.90	0.45	1.30	0.60	1.30

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
14-Aug-20	#6	Immature	1.20	2.00	0.50	1.35	0.60	1.40
14-Aug-20	#6	-			0.85	1.90	0.80	1.90
18-Sep-20	#1	Male	10.20	7.50	3.20	7.00	3.80	8.15
18-Sep-20	#1	Male	15.40	11.60	5.30	11.10	5.60	13.60
18-Sep-20	#1	Male	15.10	11.45	5.40	11.50	6.70	13.60
18-Sep-20	#3	Female	10.40	6.95	2.95	6.30	2.80	5.90
18-Sep-20	#3	Female	9.40	6.70	2.55	5.90	2.70	6.30
18-Sep-20	#3	Female	9.40	6.90	2.70	5.70	3.10	6.10
18-Sep-20	#3	Female	6.75	5.20	-	-	2.15	4.45
18-Sep-20	#3	Male	13.55	9.80	4.65	10.00	6.00	11.60
18-Sep-20	#3	Male	13.20	9.70	3.80	8.20	4.70	10.00
18-Sep-20	#3	Female	10.75	8.10	3.00	6.70	3.50	7.60
18-Sep-20	#3	Male	10.30	7.85	3.30	7.00	3.90	8.20
18-Sep-20	#3	Male	9.60	7.20	2.80	6.70	3.55	7.50
18-Sep-20	#3	Male	9.60	7.20	3.30	7.30	2.50	5.90
18-Sep-20	#3	Male	9.50	7.30	2.95	6.30	3.60	7.40
18-Sep-20	#3	Male	9.40	7.05	2.70	6.25	-	-
18-Sep-20	#3	Female	9.10	6.80	2.20	4.40	3.10	6.00
18-Sep-20	#3	Male	9.10	7.35	2.30	6.30	3.40	7.50
18-Sep-20	#3	Male	9.00	6.90	2.80	6.05	3.25	6.90
18-Sep-20	#3	Female	8.90	6.70	2.40	5.30	2.80	5.65
18-Sep-20	#3	Female	8.80	6.40	2.50	5.55	2.65	5.55
18-Sep-20	#3	Male	8.65	6.50	2.60	5.60	3.10	6.40
18-Sep-20	#3	Male	8.50	6.20	2.15	5.00	2.45	5.35
18-Sep-20	#3	Male	8.15	6.25	2.30	5.30	2.80	5.70
18-Sep-20	#3	Female	7.80	5.80	2.10	4.65	2.50	4.95
18-Sep-20	#3	Female	7.80	5.80	2.00	4.50	2.20	4.80
18-Sep-20	#3	Male	7.70	5.85	2.10	4.85	2.60	5.50
18-Sep-20	#3	Male	7.50	5.60	1.80	4.70	2.30	5.00
18-Sep-20	#3	Male	7.40	5.70	2.60	5.00	2.20	4.80
18-Sep-20	#3	Female	7.30	5.40	2.00	4.30	2.30	4.80
18-Sep-20	#3	Female	7.30	5.45	1.90	4.20	2.00	4.50
18-Sep-20	#3	Male	7.00	5.15	1.80	4.30	2.35	4.35
18-Sep-20	#3	Female	6.90	5.30	1.70	4.40	1.90	4.10
18-Sep-20	#3	Male	6.90	5.00	1.80	4.40	2.10	4.75
18-Sep-20	#3	Female	6.60	4.85	1.65	4.00	-	-
18-Sep-20	#3	Female	6.40	5.00	1.70	3.70	1.75	3.80
18-Sep-20	#3	Male	6.05	4.60	1.60	3.60	1.80	3.75
18-Sep-20	#3	Male	5.40	4.00	1.40	3.10	1.70	3.50
18-Sep-20	#4	Male	13.10	9.50	3.85	7.75	5.30	10.20
18-Sep-20	#4	Male	9.90	7.10	3.00	6.30	3.50	7.20

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
18-Sep-20	#4	Male	5.60	4.40	1.40	3.30	1.70	3.70
18-Sep-20	#6	Female	8.30	6.10	2.30	5.00	2.75	5.40
18-Sep-20	#6	Female	7.50	5.40	2.00	4.50	2.30	4.90
18-Sep-20	#6	Male	13.20	9.80	4.10	9.10	5.30	10.20
18-Sep-20	#6	Male	11.60	8.80	3.50	7.50	4.20	8.50
18-Sep-20	#6	Male	11.50	8.90	3.95	8.95	4.40	10.30
18-Sep-20	#6	Female	11.40	8.20	2.45	6.30	3.20	7.00
18-Sep-20	#6	Female	11.00	8.25	3.00	6.40	3.30	6.70
18-Sep-20	#6	Male	10.60	8.20	3.40	8.20	4.60	9.55
18-Sep-20	#6	Male	10.40	8.05	3.00	7.00	3.80	8.00
18-Sep-20	#6	Male	10.40	7.90	-	-	3.80	7.50
18-Sep-20	#6	Male	10.20	7.70	3.05	7.10	3.80	7.90
18-Sep-20	#6	Male	9.15	7.10	2.50	5.75	3.20	6.40
18-Sep-20	#6	Male	9.00	7.00	2.55	6.00	3.15	6.20
18-Sep-20	#6	Female	8.90	6.40	2.35	5.15	2.25	5.00
18-Sep-20	#6	Male	8.70	6.50	2.35	5.30	2.90	5.75
18-Sep-20	#6	Female	8.60	6.60	2.20	5.30	2.70	4.90
18-Sep-20	#6	Female	8.50	6.25	2.00	4.30	2.50	4.90
18-Sep-20	#6	Male	8.50	6.55	2.60	6.00	3.00	6.60
18-Sep-20	#6	Male	8.50	6.70	2.90	6.00	2.10	5.40
18-Sep-20	#6	Female	8.40	6.65	2.50	4.90	-	-
18-Sep-20	#6	Female	8.30	6.20	2.10	5.00	-	-
18-Sep-20	#6	Male	8.15	6.10	2.70	5.00	2.05	4.70
18-Sep-20	#6	Male	8.00	5.90	2.20	4.70	2.50	4.80
18-Sep-20	#6	Female	7.90	5.45	1.90	4.50	2.10	4.70
18-Sep-20	#6	Female	7.70	5.70	2.10	4.60	2.20	4.70
18-Sep-20	#6	Male	7.30	5.50	1.70	4.30	2.00	4.50
18-Sep-20	#6	Female	7.15	5.40	1.75	4.25	2.10	4.30
18-Sep-20	#6	Male	6.55	5.00	1.80	4.00	2.20	4.40
18-Sep-20	#6	Male	6.50	5.00	1.50	4.00	2.10	4.30
18-Sep-20	#6	Male	6.50	4.90	1.70	4.00	2.00	3.80
18-Sep-20	#6	Male	6.05	4.65	1.60	3.50	1.90	3.85
18-Sep-20	#6	Male	5.70	4.55	1.40	3.40	1.70	3.55
18-Sep-20	#6	Female	5.40	4.20	1.20	3.00	1.30	3.45
18-Sep-20	#6	Female	5.20	4.00	1.30	2.90	1.40	2.90
18-Sep-20	#6	Female	5.10	4.05	1.30	1.40	1.50	2.90
18-Sep-20	#6	Male	4.80	3.60	1.20	2.70	1.40	3.00
18-Sep-20	#6	-	4.10	3.20	1.10	2.50	1.15	2.50
18-Sep-20	#6	Male	4.10	11.00		-	-	-
18-Sep-20	#6	Immature	3.70	3.00	0.90	2.20	1.00	2.20
18-Sep-20	#6	Immature	3.60	3.00	1.15	1.90	1.05	2.25

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
18-Sep-20	#6	Immature	3.50	2.70	-	-	0.90	2.15
18-Sep-20	#6	Immature	3.20	2.60	0.70	1.80	1.00	1.85
18-Sep-20	#6	Immature	3.20	2.50	0.75	1.60	0.70	1.75
18-Sep-20	#6	Immature	3.00	2.50	0.78	1.50	0.70	1.80
18-Sep-20	#6	Immature	2.40	2.10	0.60	1.35	0.60	1.35
17-Oct-20	#1	Male	10.50	8.20	3.40	6.80	3.60	7.50
17-Oct-20	#1	Male	10.40	8.10	3.15	6.75	3.90	7.50
17-Oct-20	#1	Male	6.20	4.50	1.70	3.60	1.90	3.80
17-Oct-20	#1	-	6.10	2.30	0.60	1.50	0.70	1.50
17-Oct-20	#1	Female	4.90	4.00	1.40	3.00	-	-
17-Oct-20	#1	Male	4.30	3.40	1.20	2.50	1.30	2.60
17-Oct-20	#1	Immature	3.80	3.60	0.90	2.00	1.00	2.30
17-Oct-20	#1	Immature	3.70	3.00	1.10	2.20	0.80	1.90
17-Oct-20	#1	Immature	3.70	3.00	0.90	2.00	1.00	2.15
17-Oct-20	#1	Immature	3.65	3.00	0.90	2.00	0.90	2.10
17-Oct-20	#1	Immature	3.60	3.00	0.90	2.10	1.00	2.20
17-Oct-20	#2	Female	4.20	3.45	1.05	2.50	1.10	2.55
17-Oct-20	#2	Male	4.05	3.40	1.10	2.30	1.10	2.20
17-Oct-20	#2	Immature	3.60	2.90	-	-	0.85	1.95
17-Oct-20	#2	Immature	3.20	2.60	0.80	2.00	0.90	2.00
17-Oct-20	#2	Immature	3.20	2.70	0.85	0.75	-	-
17-Oct-20	#2	Immature	3.10	2.65	0.80	1.70	0.60	1.90
17-Oct-20	#2	Immature	3.00	2.50	0.70	1.70	0.75	1.90
17-Oct-20	#2	Immature	2.90	2.90	0.70	1.60	0.85	1.85
17-Oct-20	#2	Immature	2.90	2.35	0.70	1.60	0.70	1.60
17-Oct-20	#2	Immature	2.60	2.20	0.60	1.50	0.70	1.50
17-Oct-20	#2	Immature	2.55	2.20	0.80	1.25	-	-
17-Oct-20	#2	Immature	2.50	2.10	0.30	1.10	0.65	1.30
17-Oct-20	#3	Male	12.20	9.45	3.80	8.50	4.40	10.00
17-Oct-20	#3	Male	10.40	7.90	3.10	6.80	3.70	7.40
17-Oct-20	#3	Male	10.30	8.00	3.75	7.30	2.90	6.75
17-Oct-20	#3	Female	10.20	8.60	-	-	-	-
17-Oct-20	#3	Female	10.15	7.30	3.35	6.65	2.50	6.00
17-Oct-20	#3	Female	10.15	7.45	2.80	6.20	3.15	6.20
17-Oct-20	#3	Male	10.00	7.60	2.80	6.50	3.40	7.45
17-Oct-20	#3	Male	9.30	7.10	2.70	6.10	3.15	6.40
17-Oct-20	#3	Female	9.00	6.85	2.50	5.35	2.70	5.90
17-Oct-20	#3	Male	9.00	7.00	3.10	5.80	2.30	6.10
17-Oct-20	#3	Male	8.70	6.50	2.50	5.30	2.70	5.60
17-Oct-20	#3	Female	8.60	6.20	2.35	5.15	2.20	4.70
17-Oct-20	#3	Female	8.60	6.45	2.25	5.10	2.60	5.00

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Oct-20	#3	Male	8.60	6.65	2.45	5.40	2.80	5.85
17-Oct-20	#3	Male	8.50	6.50	2.40	5.80	2.30	5.30
17-Oct-20	#3	Male	8.40	6.50	2.35	5.30	2.60	6.00
17-Oct-20	#3	Male	8.40	6.35	2.30	5.25	2.60	5.50
17-Oct-20	#3	Male	8.30	6.00	2.25	5.05	2.40	5.40
17-Oct-20	#3	Male	8.20	6.20	2.20	5.10	2.50	5.20
17-Oct-20	#3	Male	8.20	6.15	2.65	5.40	2.00	5.00
17-Oct-20	#3	Male	7.90	6.05	2.25	5.00	2.90	5.50
17-Oct-20	#3	Male	7.70	6.00	2.00	4.70	2.55	5.40
17-Oct-20	#3	Male	7.65	5.90	2.10	4.80	2.35	4.75
17-Oct-20	#3	Female	7.45	5.60	-	-	1.80	4.50
17-Oct-20	#3	Female	7.35	5.60	2.00	4.50	2.20	4.50
17-Oct-20	#3	Male	7.25	5.70	1.85	4.25	2.10	4.35
17-Oct-20	#3	Female	7.00	5.50	1.70	4.10	1.70	4.70
17-Oct-20	#3	Male	7.00	5.35	1.85	4.20	2.10	4.45
17-Oct-20	#3	Female	6.70	4.90	1.70	3.90	1.75	4.35
17-Oct-20	#3	Male	5.50	4.20	1.50	3.30	1.65	3.35
17-Oct-20	#3	Immature	3.45	2.90	0.85	1.85	0.95	0.20
17-Oct-20	#3	Female	15.60	10.65	4.15	9.35	4.85	10.15
17-Oct-20	#3	Female	12.50	9.00	3.25	7.10	3.50	7.55
17-Oct-20	#3	Male	12.10	9.15	3.75	7.65	4.30	9.10
17-Oct-20	#3	Male	11.40	8.40	4.40	8.65	3.15	7.40
17-Oct-20	#3	Male	11.30	3.20	3.80	7.15	3.85	7.40
17-Oct-20	#3	Female	10.40	8.00	2.70	6.35	3.15	6.35
17-Oct-20	#3	Female	10.30	7.60	2.30	6.10	3.25	7.10
17-Oct-20	#3	Female	10.25	7.80	3.00	6.05	3.05	6.55
17-Oct-20	#3	Male	10.20	7.70	3.00	6.50	3.55	7.10
17-Oct-20	#3	Male	10.20	7.90	2.90	6.50	3.25	6.80
17-Oct-20	#3	Male	10.05	7.50	2.60	6.20	2.75	6.30
17-Oct-20	#3	Male	9.90	7.20	2.65	6.70	3.40	6.90
17-Oct-20	#3	Female	9.70	7.35	3.00	5.60	2.30	5.60
17-Oct-20	#3	Female	9.60	7.25	2.65	5.45	2.80	5.80
17-Oct-20	#3	Female	9.60	7.40	2.55	5.75	2.70	5.80
17-Oct-20	#3	Male	9.40	7.10	2.65	5.80	3.00	6.30
17-Oct-20	#3	Female	9.30	7.20	2.40	5.30	2.90	5.85
17-Oct-20	#3	Female	8.90	6.89	2.35	5.30	2.60	4.75
17-Oct-20	#3	Female	8.80	6.70	2.70	5.60	2.30	5.70
17-Oct-20	#3	Male	8.50	6.65	2.60	5.40	3.00	5.85
17-Oct-20	#3	Female	8.30	6.45	2.20	5.00	2.50	4.95
17-Oct-20	#3	Female	8.10	5.90	2.05	4.60	2.20	5.10
17-Oct-20	#3	Male	8.10	6.35	2.30	4.70	2.80	5.85

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
17-Oct-20	#3	Male	7.60	5.75	2.00	4.70	2.25	4.80
17-Oct-20	#3	Female	7.50	5.75	1.90	4.50	2.10	4.50
17-Oct-20	#3	Female	7.00	5.15	1.85	3.95	2.40	4.45
17-Oct-20	#3	Female	6.85	5.60	-	-	2.10	4.70
17-Oct-20	#3	Female	6.80	4.80	1.90	4.00	1.60	4.00
17-Oct-20	#3	Male	6.50	5.20	1.80	4.00	-	-
17-Oct-20	#3	Male	6.20	4.70	1.60	3.80	-	-
17-Oct-20	#3	Male	5.80	4.60	1.50	3.50	1.60	3.60
17-Oct-20	#3	Male	5.50	4.20	1.70	3.40	1.25	3.15
17-Oct-20	#3	-	4.10	3.20	1.00	2.30	1.05	2.30
17-Oct-20	#3	Immature	3.50	4.40	1.20	2.55	1.30	2.60
17-Oct-20	#3	Immature	2.50	9.40	-	-	3.50	7.90
17-Oct-20	#3	Male	15.00	11.40	5.00	10.05	5.85	13.40
17-Oct-20	#3	Female	11.50	8.30	3.00	6.50	3.70	7.30
17-Oct-20	#3	Male	11.10	8.45	3.05	7.30	4.25	8.50
17-Oct-20	#3	Female	10.80	7.80	2.90	6.40	2.50	6.00
17-Oct-20	#3	Male	9.65	7.35	2.50	6.45	3.10	6.65
17-Oct-20	#3	Male	9.60	7.00	2.65	5.60	3.10	5.80
17-Oct-20	#3	Male	9.10	12.60	3.80	8.30	5.20	9.40
17-Oct-20	#3	Male	8.90	6.80	2.50	5.40	3.20	5.80
17-Oct-20	#3	Male	8.30	6.45	2.30	5.60	2.60	6.00
17-Oct-20	#3	Female	7.35	5.75	2.00	4.40	2.00	5.00
17-Oct-20	#3	Male	7.25	5.50	2.10	4.55	2.15	4.75
17-Oct-20	#3	Female	6.90	5.35	1.50	3.80	1.80	3.90
17-Oct-20	#3	Male	5.80	4.70	1.65	3.50	1.85	3.70
17-Oct-20	#3	Male	5.40	4.30	1.15	3.10	1.25	3.10
17-Oct-20	#3	Female	4.90	4.00	1.25	2.80	1.50	3.00
17-Oct-20	#3	Male	4.80	3.80	1.20	2.55	1.30	2.90
17-Oct-20	#3	Male	4.80	3.75	1.10	2.85	1.30	2.90
17-Oct-20	#3	Male	4.45	3.55	1.10	2.50	1.35	2.70
17-Oct-20	#3	-	4.00	3.30	1.05	2.35	-	-
17-Oct-20	#3	Immature	3.50	2.80	0.90	1.80	0.95	2.00
17-Oct-20	#3	Immature	3.10	2.50	0.70	1.15	1.25	1.80
13-Nov-20	#3	Female	15.50	11.65	9.20	4.30	10.20	4.55
25-Feb-21	#3	Immature	3.85	3.20	1.00	2.20	1.00	2.90
25-Feb-21	#3	Immature	2.95	2.50	0.70	1.80	0.85	1.80
25-Feb-21	#3	Female	-	-	1.80	3.95	-	-
25-Feb-21	#3	Male	11.55	8.15	3.20	6.80	3.70	7.20
25-Feb-21	#3	Female	10.35	8.00	2.85	6.30	3.40	6.50
25-Feb-21	#3	Female	9.90	7.20	2.50	5.65	2.80	5.90
25-Feb-21	#3	Male	6.20	4.90	1.65	3.90	1.90	4.00

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
25-Feb-21	#3	Male	5.80	4.50	1.40	3.50	-	-
25-Feb-21	#3	Male	5.05	3.90	1.30	3.00	1.60	3.30
25-Feb-21	#3	Immature	3.70	3.05	0.80	2.00	1.00	2.20
25-Feb-21	#3	Immature	3.60	2.90	1.00	2.05	0.70	1.70
25-Feb-21	#3	Immature	3.40	2.70	0.80	1.55	0.90	2.00
25-Feb-21	#3	Immature	3.35	2.70	0.80	1.90	1.00	2.10
25-Feb-21	#3	Immature	3.10	2.60	0.80	1.75	0.80	1.90
25-Feb-21	#3	Immature	3.10	2.15	0.80	1.70	0.55	1.90
25-Feb-21	#3	Immature	3.00	2.50	0.70	1.50	0.65	0.60
25-Feb-21	#3	Immature	3.00	2.35	0.70	1.80	-	-
25-Feb-21	#4	Male	17.85	12.45	7.30	14.70	5.35	10.90
25-Feb-21	#4	Female	15.20	10.90	3.75	9.00	4.55	9.30
25-Feb-21	#4	Male	14.00	10.10	4.20	9.00	5.30	9.80
25-Feb-21	#4	Male	13.70	10.30	4.20	9.10	5.25	10.00
25-Feb-21	#4	Female	13.60	9.50	3.50	8.00	4.30	8.30
25-Feb-21	#4	Female	11.60	8.40	3.25	7.20	3.40	7.40
25-Feb-21	#4	Female	11.55	8.55	3.15	7.05	3.25	7.25
25-Feb-21	#4	Male	8.30	6.15	2.30	5.20	2.70	5.75
25-Feb-21	#4	Female	8.00	6.35	2.25	5.10	2.10	4.95
25-Feb-21	#4	Male	6.60	5.20	1.85	4.15	2.30	4.40
25-Feb-21	#6	Female	8.40	6.50	2.15	5.25	2.50	5.40
25-Feb-21	#6	Female	5.70	4.40	1.60	3.20	-	-
25-Feb-21	#6	Male	5.60	4.20	1.50	3.30	1.70	3.50
25-Feb-21	#6	Female	5.30	4.00	-	-	1.55	3.40
25-Feb-21	#6	Female	5.00	3.90	1.35	2.90	1.50	3.30
25-Feb-21	#6	-	4.85	3.80	1.50	3.20	-	-
25-Feb-21	#6	-	4.80	3.90	1.20	2.80	-	-
25-Feb-21	#6	-	4.50	3.55	-	-	-	-
25-Feb-21	#6	-	4.35	3.50	3.10	1.35	-	-
25-Feb-21	#6	-	4.15	3.35	1.10	2.50	1.25	2.50
25-Feb-21	#6	-	4.10	3.40	-	-	-	-
25-Feb-21	#6	-	4.00	2.85	-	-	-	-
25-Feb-21	#6	Immature	3.20	2.60	-	-	-	-
20-Mar-21	#1	Female	5.50	4.40	1.50	3.30	1.50	3.25
20-Mar-21	#1	Immature	3.90	3.20	1.10	2.30	1.10	2.30
20-Mar-21	#3	Female	11.50	8.45	3.20	6.70	3.70	7.75
20-Mar-21	#3	Male	8.65	6.60	2.45	4.70	2.80	5.60
20-Mar-21	#3	Male	7.80	5.90	2.30	4.60	2.30	5.00
20-Mar-21	#3	Male	6.60	5.20	1.80	4.10	2.20	4.50
20-Mar-21	#3	Female	5.50	4.20	1.40	3.10	1.50	3.30
20-Mar-21	#3	Male	5.10	4.10	1.25	2.80	1.40	3.00

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
20-Mar-21	#3	Male	4.70	3.65	1.20	2.70	1.50	2.85
20-Mar-21	#3	-	4.60	3.60	1.20	2.55	1.70	2.60
20-Mar-21	#3	Female	4.50	3.40	1.10	2.60	1.20	2.65
20-Mar-21	#3	Male	4.50	3.50	1.10	2.40	1.20	2.60
20-Mar-21	#3	Female	4.40	3.70	1.30	2.60	1.30	3.00
20-Mar-21	#3	-	4.20	3.20	1.00	2.40	1.30	2.70
20-Mar-21	#3	Male	4.20	3.30	1.00	2.40	1.00	2.40
20-Mar-21	#3	Immature	3.90	3.10	0.80	1.75	0.95	2.20
20-Mar-21	#3	Immature	3.90	3.10	1.00	2.30	1.10	2.35
20-Mar-21	#3	Immature	3.75	3.00	0.80	2.00	0.90	2.00
20-Mar-21	#3	Immature	3.55	2.90	0.95	1.95	1.00	2.20
20-Mar-21	#3	Immature	3.50	3.05	0.95	2.25	1.00	2.10
20-Mar-21	#3	Immature	3.20	2.80	0.85	1.80	0.80	1.90
20-Mar-21	#3	Immature	3.00	2.50	0.70	1.70	0.90	1.90
20-Mar-21	#3	Immature	3.00	2.30	0.75	1.65	0.60	1.60
20-Mar-21	#4	Female	14.10	10.40	3.75	8.40	4.20	8.80
20-Mar-21	#4	Male	11.44	8.90	3.90	8.35	2.50	7.25
20-Mar-21	#4	Male	7.60	6.00	2.10	4.50	2.20	5.00
20-Mar-21	#4	Male	7.30	5.65	2.00	4.20	2.30	4.60
20-Mar-21	#4	Male	6.65	5.15	1.80	3.90	2.15	4.30
20-Mar-21	#4	Male	6.40	5.20	1.80	4.00	2.05	4.40
20-Mar-21	#4	Male	6.30	5.00	1.75	4.00	2.00	4.00
20-Mar-21	#4	Male	6.20	4.90	1.70	3.90	1.90	3.80
20-Mar-21	#4	Female	4.70	3.70	1.20	2.40	1.30	2.85
20-Mar-21	#4	Female	4.60	3.80	1.30	2.30	1.40	2.90
20-Mar-21	#4	Female	4.55	3.70	-	-	1.40	2.80
20-Mar-21	#6	Male	6.80	5.12	1.85	4.00	1.65	4.10
20-Mar-21	#6	Male	5.45	4.20	-	-	1.60	3.30
20-Mar-21	#6	Female	5.00	3.80	1.30	3.00	1.40	2.80
20-Mar-21	#6	Male	5.00	4.00	1.55	3.20	1.40	3.10
20-Mar-21	#6	Male	5.00	4.00	1.50	3.30	1.40	2.90
20-Mar-21	#6	Male	4.90	3.90	1.20	2.80	1.50	3.20
20-Mar-21	#6	Female	4.55	3.55	1.10	2.60	1.10	2.90
20-Mar-21	#6	Female	4.55	3.65	1.20	2.75	1.30	3.00
20-Mar-21	#6	Male	4.40	3.60	1.10	3.70	1.15	3.80
20-Mar-21	#6	Female	4.05	3.35	1.00	2.35	1.20	2.40
20-Mar-21	#6	Immature	3.50	2.85	0.90	2.00	1.00	2.20
20-Mar-21	#6	Immature	3.00	2.50	0.80	1.50	0.80	1.85
20-Mar-21	#6	Immature	0.90	1.70	0.90	1.80	0.90	2.00
14-Apr-21	#3	Male	10.05	7.00	3.00	6.20	2.00	4.80
14-Apr-21	#3	Male	10.00	7.50	3.50	7.35	2.40	6.00

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
14-Apr-21	#3	Male	8.90	6.80	2.50	5.70	2.60	6.00
14-Apr-21	#3	Female	8.20	6.25	2.30	5.05	2.40	5.30
14-Apr-21	#3	Male	5.25	4.10	1.40	3.15	1.55	3.20
14-Apr-21	#3	Male	5.20	4.15	1.40	3.15	1.65	3.30
14-Apr-21	#3	Male	4.40	3.55	1.10	2.60	1.05	2.50
14-Apr-21	#3	Immature	3.30	2.90	0.90	1.90	0.90	1.90
14-Apr-21	#3	Immature	2.90	2.55	-	-	-	-
14-Apr-21	#4	Female	15.10	11.60	4.55	9.95	4.70	10.00
14-Apr-21	#6	Female	11.05	8.40	3.50	7.50	2.80	6.50
14-Apr-21	#6	Female	10.90	8.25	3.15	6.55	3.50	7.00
14-Apr-21	#6	Male	10.60	8.00	3.80	7.80	2.60	6.50
14-Apr-21	#6	Male	10.30	7.90	2.80	6.75	3.40	6.90
14-Apr-21	#6	Male	10.00	6.75	-	-	3.50	7.20
14-Apr-21	#6	Male	9.00	7.10	2.50	5.70	2.90	5.75
14-Apr-21	#6	Female	6.80	5.10	1.70	3.95	2.10	4.90
14-Apr-21	#6	Female	6.40	4.80	1.60	3.40	2.00	4.15
14-Apr-21	#6	Male	5.50	4.25	1.30	3.25	1.50	3.70
14-Apr-21	#6	Male	5.50	4.40	1.40	3.20	1.70	3.40
14-Apr-21	#6	Male	5.50	4.10	1.40	3.10	1.80	3.70
14-Apr-21	#6	-	5.25	4.05	1.35	2.90	1.50	3.20
14-Apr-21	#6	Female	4.90	3.85	1.80	2.80	1.20	2.70
14-Apr-21	#6	Female	4.50	3.60	1.10	2.50	1.30	2.70
14-Apr-21	#6	Female	4.40	3.60	1.10	2.50	1.70	2.65
14-Apr-21	#6	Male	4.10	3.30	1.00	2.30	1.20	2.40
14-Apr-21	#6	Immature	3.90	3.20	0.85	2.00	0.90	1.90
14-Apr-21	#6	Immature	3.85	3.10	1.00	2.10	1.00	2.20
14-Apr-21	#6	Immature	3.80	3.00	0.90	2.20	1.10	2.20
14-Apr-21	#6	Immature	3.00	2.40	-	-	0.90	1.75
14-Apr-21	#6	Immature	3.00	2.50	0.80	1.50	0.70	1.90
14-Apr-21	#6	Immature	2.80	2.40	0.80	1.80	0.80	2.00
18-Jun-21	#1	Female	4.70	3.80	1.20	2.70	1.40	2.80
13-Aug-21	#1	Female	7.80	5.80	2.10	4.55	2.50	4.95
13-Aug-21	#1	Male	7.80	6.10	1.95	4.95	2.35	5.30
13-Aug-21	#1	Female	6.60	5.00	1.80	4.30	-	-
13-Aug-21	#1	Female	6.00	4.60	1.60	3.70	1.60	3.80
13-Aug-21	#1	Male	5.40	4.15	1.50	3.50	1.30	3.10
13-Aug-21	#1	Immature	3.70	3.10	1.00	2.15	1.00	2.30
13-Aug-21	#1	Immature	2.50	2.10	0.65	1.55	0.65	1.50
13-Aug-21	#1	Male			1.70	4.00	2.30	4.30
13-Aug-21	#2	Female	-	-	-	-	2.20	4.40
13-Aug-21	#2	Female	-	-	2.70	5.80	3.20	6.80

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
13-Aug-21	#2	Male	14.30	10.70	4.80	10.00	6.15	12.00
13-Aug-21	#2	Male	12.40	9.35	4.15	8.40	5.12	9.60
13-Aug-21	#2	Male	11.15	8.35	3.75	7.75	4.65	8.80
13-Aug-21	#2	Male	10.00	7.70	3.10	7.10	3.90	8.25
13-Aug-21	#2	Female	9.90	7.40	2.90	6.00	3.40	6.50
13-Aug-21	#2	Female	9.30	7.00	2.55	5.60	1.90	4.70
13-Aug-21	#2	Female	8.80	6.65	2.40	5.25	2.90	5.90
13-Aug-21	#2	Female	8.60	6.60	2.30	5.10	2.65	5.40
13-Aug-21	#2	Female	8.15	6.25	2.20	5.10	2.40	5.30
13-Aug-21	#2	Male	8.15	6.10	2.60	5.30	3.10	6.00
13-Aug-21	#2	Female	8.10	6.15	1.50	4.15	2.40	4.90
13-Aug-21	#2	Female	8.00	6.00	2.10	4.60	-	-
13-Aug-21	#2	Female	8.00	6.50	2.00	4.60	2.30	5.00
13-Aug-21	#2	Male	8.00	6.25	2.50	5.50	3.15	6.50
13-Aug-21	#2	Female	7.50	5.60	1.80	4.40	2.20	4.40
13-Aug-21	#2	Male	7.50	5.60	2.00	4.30	2.20	5.00
13-Aug-21	#2	Male	7.45	5.75	1.85	4.25	-	-
13-Aug-21	#2	Female	7.35	5.50	1.95	4.30	2.20	4.50
13-Aug-21	#2	Male	7.20	5.50	2.10	4.60	2.50	5.20
13-Aug-21	#2	Female	7.00	5.40	1.40	3.40	2.00	4.20
13-Aug-21	#2	Male	7.00	5.50	1.90	4.20	1.60	4.00
13-Aug-21	#2	Male	7.00	5.50	1.90	4.30	-	-
13-Aug-21	#2	Male	6.90	5.45	-	-	2.50	4.80
13-Aug-21	#2	Female	6.80	5.25	1.80	4.00	1.80	4.20
13-Aug-21	#2	Male	6.75	5.25	1.90	4.20	2.25	4.70
13-Aug-21	#2	Female	6.70	5.00	1.85	4.00	1.80	4.20
13-Aug-21	#2	Male	6.60	5.15	1.90	4.00	2.30	4.40
13-Aug-21	#2	Female	6.35	4.80	1.95	3.90	1.55	3.70
13-Aug-21	#2	Male	6.30	5.10	1.70	3.90	-	-
13-Aug-21	#2	Female	6.20	4.85	1.75	3.70	1.75	3.80
13-Aug-21	#2	Female	6.10	4.70	1.60	3.40	1.90	3.80
13-Aug-21	#2	Female	6.00	4.70	1.50	3.60	1.60	3.65
13-Aug-21	#2	Female	5.90	4.10	1.50	3.40	1.50	3.60
13-Aug-21	#2	Female	5.70	4.40	1.40	3.40	1.60	3.40
13-Aug-21	#2	Male	5.70	4.60	1.20	4.00	-	-
13-Aug-21	#2	Male	5.50	4.00	1.50	3.10	-	-
13-Aug-21	#2	Male	5.40	4.20	1.55	3.25	1.75	3.80
13-Aug-21	#2	Female	5.20	4.10	1.40	3.30	-	-
13-Aug-21	#2	Male	5.20	4.20	1.50	3.20	1.70	3.50
13-Aug-21	#2	Male	5.10	3.80	1.35	3.00	1.45	3.20
13-Aug-21	#2	Female	4.95	3.80	1.25	2.80	1.45	3.20

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
13-Aug-21	#2	Female	4.80	3.65	1.30	2.80	1.05	2.60
13-Aug-21	#2	Female	4.80	3.80	1.30	2.75	1.05	2.50
13-Aug-21	#2	Female	4.60	3.55	1.20	2.60	1.20	2.80
13-Aug-21	#2	Female	4.60	3.75	1.30	2.80	1.00	2.65
13-Aug-21	#2	Female	4.60	3.55	1.10	2.45	1.40	2.80
13-Aug-21	#2	Male	4.35	3.45	1.20	2.55	1.40	2.85
13-Aug-21	#2	Female	4.30	3.40	1.10	2.55	1.10	2.70
13-Aug-21	#2	Immature	3.80	2.80	-	-	0.90	2.20
13-Aug-21	#2	Immature	3.75	3.00	1.00	2.40	0.40	2.35
13-Aug-21	#2	Immature	3.65	3.00	0.95	2.20	1.00	2.20
13-Aug-21	#2	Immature	3.55	2.85	0.90	2.00	-	-
13-Aug-21	#2	Immature	3.30	5.00	1.80	3.90	2.10	2.20
13-Aug-21	#2	Immature	2.60	2.20	-	-	0.70	1.55
13-Aug-21	#2	Immature	2.40	3.05	0.50	1.30	0.60	1.60
13-Aug-21	#2	Immature	2.30	2.00	0.55	1.20	0.55	1.20
13-Aug-21	#2	Immature	2.20	1.95	0.40	1.15	0.70	1.95
13-Aug-21	#2	Immature	2.10	1.80	0.50	1.20	-	-
13-Aug-21	#2	Immature	2.10	1.95	0.45	1.10	0.50	1.15
13-Aug-21	#2	Immature	2.00	1.85	0.45	1.30	0.50	1.30
13-Aug-21	#2	Immature	2.00	1.80	-	-	0.50	1.30
13-Aug-21	#2	Immature	1.85	1.70	0.45	1.00	0.55	1.20
13-Aug-21	#2	Immature	1.80	3.90	1.80	3.89	-	-
13-Aug-21	#2	Immature	1.00	2.10	0.95	2.00	1.10	2.25
13-Aug-21	#3	Male	5.35	4.10	-	-	1.60	3.70
13-Aug-21	#3	Female	10.00	7.45	2.90	6.00	3.20	6.30
13-Aug-21	#3	Female	8.60	6.15	2.30	5.10	3.00	6.30
13-Aug-21	#3	Male	11.40	8.45	3.60	7.30	4.60	8.90
13-Aug-21	#3	Male	10.30	7.90	3.15	7.00	3.80	7.75
13-Aug-21	#3	Male	9.15	6.65	2.75	5.70	3.40	6.65
13-Aug-21	#3	Male	9.10	6.80	2.95	6.25	3.90	7.20
13-Aug-21	#3	Female	9.00	6.80	2.50	5.50	3.00	5.80
13-Aug-21	#3	Male	8.90	6.70	2.50	5.90	3.20	6.50
13-Aug-21	#3	Male	8.50	6.55	2.60	5.70	3.50	6.50
13-Aug-21	#3	Female	8.30	6.35	2.35	4.95	2.70	5.40
13-Aug-21	#3	Female	8.15	6.20	2.20	4.80	2.75	5.20
13-Aug-21	#3	Female	8.00	6.00	2.25	4.80	2.60	5.10
13-Aug-21	#3	Female	8.00	5.70	2.00	4.70	2.20	5.10
13-Aug-21	#3	Male	7.90	6.40	2.20	5.00	2.90	5.40
13-Aug-21	#3	Female	7.60	5.70	2.00	4.40	2.35	4.45
13-Aug-21	#3	Male	7.50	5.75	2.20	4.80	2.65	5.50
13-Aug-21	#3	Female	7.00	5.30	1.80	3.95	-	-

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
13-Aug-21	#3	Female	7.00	5.40	1.90	4.20	2.20	4.80
13-Aug-21	#3	Male	6.90	5.30	1.95	4.20	2.40	4.70
13-Aug-21	#3	Male	6.85	5.40	2.20	4.55	1.50	3.90
13-Aug-21	#3	Male	6.80	5.45	1.75	4.20	2.35	4.80
13-Aug-21	#3	Female	6.70	5.00	1.80	3.90	1.90	4.15
13-Aug-21	#3	Female	6.40	4.85	1.65	3.70	2.30	4.60
13-Aug-21	#3	Female	6.30	4.70	1.60	3.70	1.85	3.75
13-Aug-21	#3	Female	6.30	5.00	1.60	3.80	1.70	3.70
13-Aug-21	#3	Male	6.30	5.00	-	-	2.20	4.45
13-Aug-21	#3	Female	6.25	4.75	-	-	-	-
13-Aug-21	#3	Male	6.05	4.70	1.70	3.70	2.00	4.00
13-Aug-21	#3	Female	5.90	4.35	1.25	3.10	1.65	3.55
13-Aug-21	#3	Male	5.80	4.50	1.50	3.50	2.00	4.45
13-Aug-21	#3	Female	5.70	4.50	1.40	3.40	1.75	3.50
13-Aug-21	#3	Female	5.70	4.20	1.40	3.50	-	-
13-Aug-21	#3	Female	5.50	4.20	1.40	3.10	1.50	3.25
13-Aug-21	#3	Female	5.50	4.20	-	-	1.65	3.00
13-Aug-21	#3	Female	5.35	4.00	1.25	2.90	1.40	3.00
13-Aug-21	#3	Male	5.30	4.10	1.40	3.20	1.60	3.40
13-Aug-21	#3	Female	5.25	4.15	1.40	3.10	1.40	3.25
13-Aug-21	#3	Female	5.10	3.90	-	-	1.40	2.80
13-Aug-21	#3	Male	5.00	3.80	1.30	2.85	1.30	3.00
13-Aug-21	#3	Male	5.00	3.83	1.25	2.95	1.50	3.15
13-Aug-21	#3	Male	4.90	4.00	1.35	2.90	1.55	3.10
13-Aug-21	#3	Male	4.80	3.70	1.10	2.90	1.30	3.20
13-Aug-21	#3	Male	4.50	3.50	1.15	2.70	1.20	2.80
13-Aug-21	#3	Male	4.50	3.50	1.15	2.20	1.40	2.60
13-Aug-21	#3	Male	4.40	3.30	1.20	2.55	1.20	2.80
13-Aug-21	#3	Male	4.20	3.20	1.05	2.50	-	-
13-Aug-21	#3	Immature	3.60	3.00	0.95	1.90	1.20	2.40
13-Aug-21	#3	Immature	3.60	2.90	0.90	2.05	0.90	2.15
13-Aug-21	#3	Immature	3.50	2.85	0.90	2.00	1.00	2.10
13-Aug-21	#3	Immature	3.30	2.70	0.75	1.80	0.95	2.10
13-Aug-21	#3	Immature	3.10	2.60	0.80	1.80	0.90	2.05
13-Aug-21	#3	Immature	2.90	2.30	0.65	1.60	0.60	1.85
13-Aug-21	#3	Immature	2.75	2.30	0.70	1.65	-	-
13-Aug-21	#3	Immature	2.50	2.10	0.55	1.30	0.70	1.45
13-Aug-21	#3	Immature	1.75	3.85	1.75	3.90	1.80	4.40
13-Aug-21	#3	Immature	1.60	1.40	0.30	0.80	0.30	1.00
13-Aug-21	#4	Female	-	-	2.15	5.60	-	-
13-Aug-21	#4	Female	10.80	7.75	-	-	3.00	6.50

Date	Site	Sex	CW	CL	LCW	LCL	RCW	RCL
13-Aug-21	#4	Female	9.05	6.90	2.55	5.20	2.80	5.70
13-Aug-21	#4	Female	8.75	6.65	2.50	4.70	-	-
13-Aug-21	#4	Male	8.40	6.00	2.25	5.05	2.85	5.70
13-Aug-21	#4	Male	8.10	6.25	2.40	5.30	2.80	6.00
13-Aug-21	#4	Female	7.95	5.80	2.35	4.90	2.80	5.30
13-Aug-21	#4	Male	7.70	5.90	2.90	5.60	2.20	5.25
13-Aug-21	#4	Male	6.90	5.65	2.00	4.30	2.50	4.75
13-Aug-21	#4	Female	6.80	5.20	1.55	3.70	2.25	4.70
13-Aug-21	#4	Male	6.60	5.00	1.75	3.90	-	-
13-Aug-21	#4	Female	5.20	4.00	1.35	3.00	1.50	3.20
13-Aug-21	#5	Male	12.30	8.90	4.10	8.80	5.40	10.20
13-Aug-21	#5	Male	10.75	7.90	-	-	4.15	8.20
13-Aug-21	#5	Female	10.35	7.80	2.80	6.50	3.55	7.50
13-Aug-21	#5	Male	9.95	7.50	2.85	6.30	3.30	6.90
13-Aug-21	#5	Female	9.35	7.10	2.65	5.80	2.80	5.90
13-Aug-21	#5	Male	8.95	6.90	2.85	6.20	3.30	7.00
13-Aug-21	#5	Female	7.90	6.00	2.15	4.80	-	-
13-Aug-21	#5	Female	7.90	6.20	2.10	4.90	2.40	5.35
13-Aug-21	#5	Male	6.90	5.35	1.90	4.50	-	-
13-Aug-21	#5	Male	6.80	5.35	1.95	3.90	2.30	4.40
13-Aug-21	#5	Male	6.60	5.30	1.90	4.30	-	-
13-Aug-21	#5	Female	6.20	4.45	-	-	1.85	3.80
13-Aug-21	#5	Female	5.10	3.90	1.30	3.00	-	-
13-Aug-21	#5	Male	4.50	3.55	1.20	2.60	-	-
13-Aug-21	#5	Male	4.10	3.30	1.05	2.35	1.20	2.50
13-Aug-21	#5	Male	4.00	3.25	1.00	2.25	1.10	2.35
13-Aug-21	#5	Immature	3.20	2.70	0.80	1.80	1.05	1.80