THE MISSISSIPPI KITE

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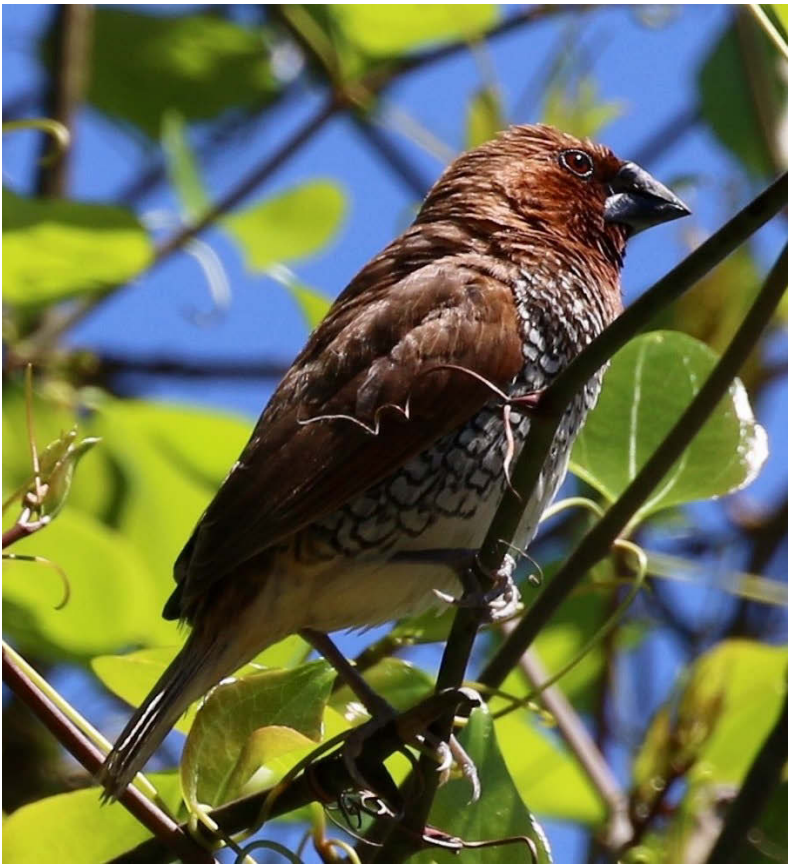

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THE MISSISSIPPI KITE

The Mississippi Kite is a biannual periodical published by the Mississippi Ornithological Society to record and further the study of Mississippi birdlife.

Vol. 48, No. 2 December 2018

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COVER IMAGE: Scaly-breasted Munia (*Lonchura punctulata*), 31 March 2018, Diamondhead, Mississippi, by Holly Cox.

ESTABLISHMENT AND SPREAD OF THE SCALY-BREASTED MUNIA (*LONCHURA PUNCTULATA*) IN MISSISSIPPI

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OVERVIEW

The Scaly-breasted Munia (*Lonchura punctulata*), also known as Nutmeg Mannikin or Spice Finch in the pet trade, is a finch (Estrildidae) species native to Asia. Due to its popularity in the pet trade, and its ability to naturalize post-release, it has become well established in numerous locations outside its native range (eBird 2018). In the United States, there are established populations in Hawaii, California, Texas, Florida, and less extensive populations in a few other states (eBird 2018). Reports of the species have increased in southern Mississippi in recent years (eBird 2018). The purposes of this paper are to summarize the history of its occurrence in Mississippi, and report some observations on its life history in this non-native part of its range. We utilized eBird reports, miscellaneous sightings reported to the Mississippi Bird Records Committee and on social media, and detailed field observations by one of us (Epps).

Scaly-breasted Munias were first reported from Mississippi during November 2010 at Diamondhead in eastern Hancock County, and have since been consistently reported from Diamondhead. Three years passed before another report came from elsewhere in Mississippi, when reports started coming from Jackson and eastern Harrison counties. No reports came from outside of Diamondhead during 2015. Munias were reported from

Long Beach in western Harrison County, not far from Diamondhead, during 2016. Reports became more widespread in 2017 and 2018, including multiple locations from Jackson and Harrison counties, a report from as far north as Jones County, and additional reports from just outside the Diamondhead area in eastern Hancock and western Harrison counties.

INITIAL ESTABLISHMENT IN HANCOCK COUNTY

Scaly-breasted Munias were first reported from Mississippi by Jason Pyron during November 2010 in the community of Diamondhead, which is located just inland from Bay Saint Louis in Hancock County, the westernmost county in Mississippi on the Gulf of Mexico coast. The source of these birds is unknown. Epps determined that the individuals seen at Diamondhead belonged to the subspecies *L. p. punctulata*, native to Pakistan, India, and Sri Lanka. This is the only form with orange uppertail-coverts and pure black and white scaly markings on the breast and flanks (Restall 1997), and is apparently the most popular in the pet trade (Lang 2007). On 9 December 2011, Epps observed that the PetSmart pet store in Gulfport had several of this same subspecies on sale for $19.79 each. At the time the first birds were found at Diamondhead, the species had been breeding in the western panhandle of Florida for at least 10 years (Duncan and Duncan 2018), and had been sighted in coastal Alabama for the first time in 2007 (Kittle et al. 2008). More than 300 miles west, in Houston, Texas, Scaly-breasted Munia sightings began as early as 2004 (Conn et al. 2017). In Houston, large numbers of Scaly-breasted Munias were sometimes released at Asian weddings rather than throwing rice (Collins 2015, Conn et al. 2017). The source of the Mississippi birds is unknown, but may have resulted from a similar release, or they may have spread from populations in neighboring states.

Following the initial detection at Diamondhead, munias apparently began to breed and spread in that immediate area. In 2011, there were several reports from different points around the Diamondhead neighborhood, which included juvenile birds. For example, on 8 December, Epps observed an adult and two juveniles at her feeder. Pyron had 15 at a feeder on 17 December, including 12 juveniles. Through 2014, flocks of more than 10 (Figure 1), then later more than 20, became more common. Epps observed a high count of more than 50 at her feeder during August 2012, followed by a new high of over 100 on 1 October 2014. Flocks were usually dominated by non-adult birds, indicating continued breeding.

Figure 1. Juvenile and adult Scaly-breasted Munias visiting bird feeders at Diamondhead (Hancock Co.), Mississippi, September 2012. Photograph by Susan Epps.

REPORTS IN MISSISSIPPI AWAY FROM DIAMONDHEAD

In 2013 and 2014, observations began to come from Mississippi coastal sites east of Diamondhead. The first report from Mississippi outside of Diamondhead was a single juvenile photographed by Judy Wilder at her feeder on Seaman Road near Vancleave in Jackson County on 25 November 2013. Margaret McCrary observed six individuals (and photographed an adult) on 24 April 2014 at her feeders near Bayou Bernard near Gulfport in Harrison County. On 12 November 2014, Christine Kelley reported one juvenile at her feeder on Dale Lane near Moss Point in Jackson County. Aside from Diamondhead, no further reports of munias were made during 2015.

During 2016, reports of munias began to come from approximately 10 miles east-southeast of Diamondhead at Long Beach in western Harrison County, suggesting potential direct spread from the Diamondhead population. Frank Reed began seeing munias at his Long Beach home near the Mississippi Sound during spring 2016, including flocks of at least 50 and a permanent pair. Beginning in 2017, sightings of Scaly-breasted Munias appeared more frequently along the Mississippi Coast at multiple locations in both Harrison and Jackson counties, including one observation much farther north. June Ladner, Holly Cox, and Rhonda Plitt observed two adults feeding three to four recently-fledged juveniles in a black gum (*Nyssa sylvatica*) tree on 5 and 9 September 2017 at Reunion Place at Biloxi, just north of Back Bay. Sheila Murphy photographed two juveniles on 9 November 2017 across the bay at Biloxi's Hiller Park. Billy Hauer photographed two juveniles at a feeder on 23 December 2017 in the Hunters Chase neighborhood at Gulfport, well north of the previous Harrison County sightings. The only report to date away from the Coast was of a single bird photographed by Jan Dykes in a pasture at the Big Creek community in northwest Jones County

during November 2017. Beginning on 28 December 2017, and ending on 7 June 2018, Brian Johnston documented a single munia visiting a feeder in his yard at Pascagoula. Elsewhere in Jackson County, Suzanne Schneidau observed a group of up to six munias (including some juveniles) visiting her feeders between March and May, 2018, at El Bonito Drive in north Ocean Springs. JoMarie Favre LeBlanc reported a flock of more than 30 individuals at Long Beach during early November 2018. Lori McDonald photographed a juvenile near Bayou DeLisle at Pass Christian on 30 November 2018. Katy Criswell reported a single bird from Long Beach on 14 December 2018, and Aaron Mitchell and William McFarland reported a single munia foraging in roadside grass with a Song Sparrow (*Melospiza melodia*) at Washington Street Pier in southeastern Hancock County three days later.

OBSERVATIONS ON BREEDING, MOLT, AND FEEDING

Epps' detailed observations at her yard at Diamondhead suggest that Scaly-breasted Munias commence breeding each year during late April and May, with possible additional broods later in the summer. For example, in 2013, the first young of the year appeared at her feeders on 29 May; in 2014, the first fledglings appeared on 11 June. On 23 August 2013, Epps observed 28 juveniles with apparent fresh juvenile plumage at her feeders, suggesting they belonged to one or more late-summer broods. Epps found two unoccupied munia nests at Diamondhead during the month of August. On 2 August 2013, a woven nest of grass was found on the ground (Figure 2A). On 1 August 2014, a similar nest was photographed in a crape myrtle (*Lagerstroemia* sp.; Figure 2B).

Regarding molt progression, scales often began to appear on the underpart feathers of 1st-year birds during October. By March, the young of the previous summer had typically acquired

Figure 2. Woven nests built by Scaly-breasted Munias at Diamondhead (Hancock Co.), Mississippi. (A) Fallen on the ground 2 August 2013, and (B) in a crape myrtle tree 1 August 2014. Photographs by Susan Epps.

some scaling on their underparts, with some being completely scaled, although all still typically lacked chestnut on the face. The 1st-winter bird visiting the Johnston yard at Pascagoula during 2017-2018 (mentioned above) molted from partially-scaled during late December into apparent full adult plumage by June, with much of the transition happening rapidly during April and May (photographs can be seen in a series of eBird checklists documenting this individual, beginning here: https://ebird.org/view/checklist/S41382077). Epps documented at least one individual that apparently fledged during June 2013 with noticeably grayer plumage than all other individuals she had observed. Later that summer, another unusually gray individual appeared, possibly a different bird based on its apparent molt progression (Figure 3).

At feeders, munias seemed to prefer white millet. However, Epps' observations also determined that the munias at

Figure 3. Scaly-breasted Munia with plumage much grayer than average, at Diamondhead (Hancock Co.), Mississippi, late August 2013. Photograph by Susan Epps.

Diamondhead utilized a wide variety of wild foods, not just seed from feeders. A frequent food source was the seeds of panic grass (*Panicum* spp.), which is also an important food source in their native range (Restall 1997). Other grass seeds observed to be eaten included centipede grass (*Eremochloa ophiuroides*) in yards that had not been recently mowed, rye grass (*Lolium* spp.), and pampas grass (*Cortaderia* spp.). Munias also fed on the seeds of swamp titi (*Cyrilla racemiflora*), the ripening berries in August and September of wax myrtle (*Myrica cerifera*), and the flowers or fruits of Chinese tallow (*Triadica sebifera*). Other vegetative parts

consumed included (commonly) the buds of longleaf pine (*Pinus palustris*) and gardenia (*Gardenia* spp.), and the leaves of dog fennel (*Eupatorium capillifolium*).

Munias are considered pests on cultivated rice and other crops in parts of their native range, and were considered a rice and sorghum pest in Hawaii before these crops became less frequently-grown there (Long 1981). These crops are mostly grown farther north in Mississippi where munias are currently absent; an economic impact seems unlikely at this time.

CONCLUSIONS

The Scaly-breasted Munia appears to have established in coastal Mississippi, and has successfully bred there since at least 2011. It appears to have bred in multiple locations in recent years, as evidenced by the wide-ranging presence of recently-fledged birds, and has even been observed much farther north in Jones County. Its progress should continue to be monitored, and then should be summarized again after 2025. If still effectively naturalized after 2025, it will have been present and breeding for at least 15 years. This is one of eight criteria used by American Birding Association's Checklist Committee for determining establishment of exotic bird species (http://listing.aba.org/criteria-determining-establishment-exotics/). Currently the only states with Scaly-breasted Munias on their official state bird lists are Hawaii and California, although it would not be surprising to see them added in Texas or Florida in the near future.

ACKNOWLEDGMENTS

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MONITORING AVIAN PRODUCTIVITY AND SURVIVORSHIP (MAPS) AT STRAWBERRY PLAINS AUDUBON CENTER: 2017-2018

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INTRODUCTION

Pronounced declines in populations of many North American landbird species are evident in count-based data analyses from large-scale, long-term monitoring programs (Robbins et al. 1989, Peterjohn et al. 1995, Bart 2005; e.g., North American Breeding Bird Survey). Although these findings are useful for describing geographic and temporal changes, they do not provide the causes for declines or, more specifically, information regarding which life-cycle stage accounts most for observed population changes (Temple and Wiens 1989, Sherry and Holmes 1995). Thus there is a critical need for demographics data to delineate proximate and ultimate causes of bird population changes across spatial and temporal scales so proper conservation and management actions can be prescribed (DeSante 1995, Sillett and Holmes 2002, Julliard 2004, DeSante et al. 2005).

In 1989, the Institute for Bird Populations (IBP) developed Monitoring Avian Productivity and Survivorship (MAPS), a cooperative, constant-effort, bird banding program that occurs during the breeding season to provide critical demographic information. This is done through evaluating capture-recapture data to show long-term trends of demographic parameters (i.e. vital rates) such as population size, adult survivorship, productivity, and recruitment into the adult population (DeSante et al. 1993, 1995). The MAPS program has grown to include over 1,400 banding stations across the USA and Canada, operated by individuals,

government entities, and non-governmental organizations (IBP 2017). Over two million bird capture records have been processed, and hundreds of papers and reports have been published (https://www.birdpop.org/pages/maps.php) from the data. MAPS results have been combined with other large-scale bird census data to provide valuable insights regarding the influence of vital rates on population metrics (Saracco et al. 2009, George et al. 2015). Recently, IBP has analyzed MAPS data spanning from 1992 to 2006 including 682,119 banding records from 628 banding stations to launch the website "Vital Rates of North American Landbirds" (DeSante et al. 2015). For 158 landbird species, this website provides vital rates that can aid scientists, planners, and managers to direct conservation efforts at specific annual stages which limit populations (Saracco et al. 2008).

To contribute to MAPS efforts in Mississippi, I collaborated with Strawberry Plains Audubon Center (SPAC) Director, Mike Muraco and Conservation Education Manager, Mitchell Robinson to initiate a MAPS program at SPAC during 2017. We aligned our MAPS objectives with those of IBP. Objectives for the MAPS program are to provide (1) annual indices of adult populations and post-fledging productivity, and (2) annual estimates of adult survivorship, adult population size, and recruitment into the adult population (DeSante 2000).

METHODS

Study Site

Large-scale bird conservation projects in North America are often modeled within the framework of Bird Conservation Regions (BCRs), which are defined by the North American Bird Conservation Initiative as "ecologically distinct regions in North America with similar bird communities, habitats, and resource

management issues" (http://nabci-us.org/resources/bird-conservation-regions/). Our MAPS study site is located near Holly Springs, Mississippi, at SPAC, a 2,600 acre nature preserve with several diverse landscapes, including upland and lowland mixed forests, prairies, wetlands, and shrublands. SPAC is within the Southeastern Coastal Plain (SCP) BCR, which extends from west Tennessee south to the Gulf Coast and east to the Atlantic Coast, bordered by the Appalachian Mountains to the north (Figure 1).

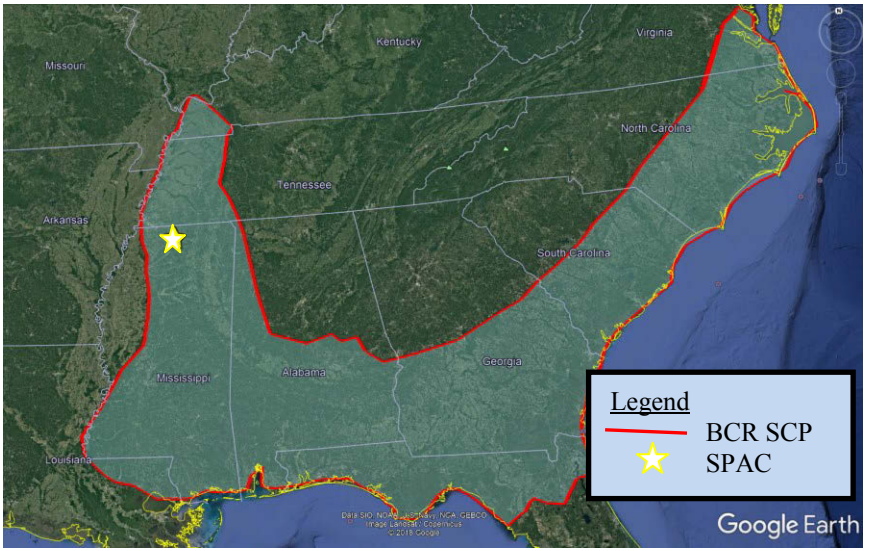

Figure 1. Location of Strawberry Plains Audubon Center (SPAC) within the Southeastern Coastal Plain (SCP) Bird Conservation Region (BCR).

Research Objectives

Effective analyses of population demographics data require at least four years of data collection (DeSante 2000, Albert et al. 2016). Given the newness of our MAPS station, the scope of this

paper is limited to reporting productivity analyses using data available to date (2017 and 2018). We conducted a limited productivity analysis for species in which we captured ≥30 aged unique individuals in both years combined. These data may provide insight on whether productivity is a limiting factor for breeding birds at SPAC compared to populations at larger geographical scales.

Data Collection

MAPS stations are located where human development is limited, and nets are spread out across the landscape to be representative of the habitat (all methods summarized in DeSante et al. 2016). Stations are operated one out of every ten days during designated "periods" throughout the breeding season. There were eight banding sessions from May to August 2017 and 2018. Birds were captured in "mist nets" (dimensions: 12 m long and 2.5 m tall) made of a fine material specifically for the purpose of safely and humanely trapping birds. The mesh size we used, 30-mm, captured our target populations (i.e. songbirds, woodpeckers, cuckoos) most effectively. The MAPS protocol suggests operation of seven to 20 mist nets opened around sunrise for four to six hours, using the same net locations each year to standardize capture data. For the SPAC MAPS station, we operated 20 nets for five hours per day. Nets were spread 100 m apart, across 36.2 ha of upland hardwood forest and early successional prairie and shrubland (Figure 2). The banding station included all area that was within 100 m of each net.

During banding sessions, we checked nets every 30 min. Birds were quickly extracted and placed into breathable cloth bags, then brought to a central station and processed as quickly as possible. At the banding station, birds were first marked with a uniquely-numbered United States Geological Survey (USGS)

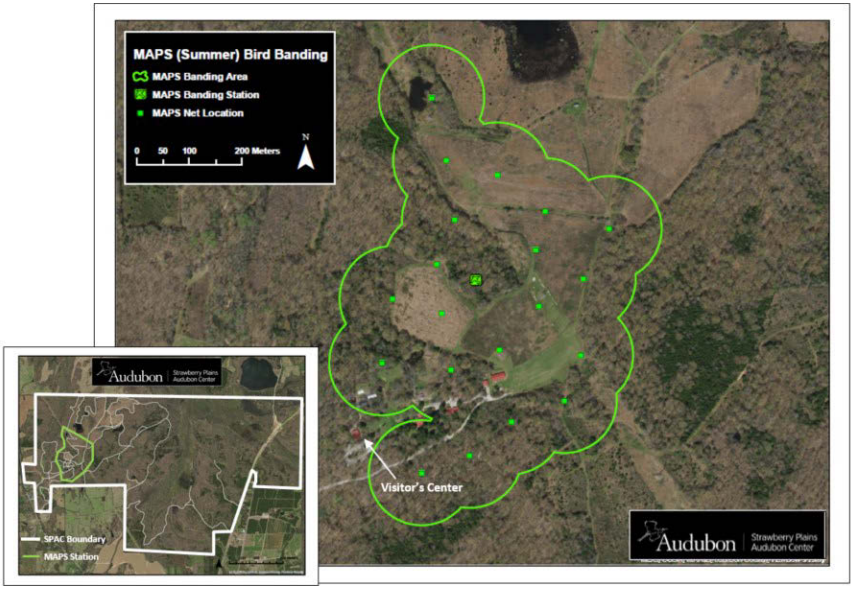

Figure 2. SPAC MAPS banding station location. Station included 20 nets with 100 m buffer surrounding all nets.

lightweight aluminum band before taking data (i.e. band number, capture status [new or recapture], species, age, sex, ageing and sexing criteria, physical condition including breeding status data, capture time, station, and net number; e.g., Figures 3-7). We used ageing and sexing guidelines established by Pyle (1997, 2004) and exhibited in photographs by Froehlich (2003). After processing, birds were released at the station. Females with brood patches (Figure 8) and fledglings were processed and released first.

Other data collected for MAPS were effort (number of hours each net was open), habitat data, and breeding (summer residency) status. Effort was calculated through the standardization and recording of net opening and closing times for each period, and was reported as "net hours". We conducted habitat surveys in 2018 across the banding station using IBP's Habitat Structure

Figure 3. After hatch year (adult, left) and hatch year (young, right) White-eyed Vireos. Note difference in eye color. Photograph by Thomas Blevins.

Figure 4. After hatch year (adult, left) and hatch year (young, right) Tufted Titmice. Note difference in plumage condition. Photograph by Thomas Blevins.

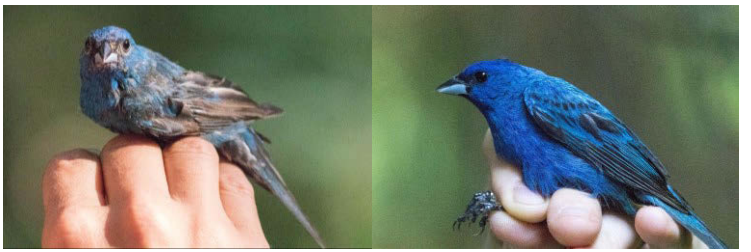

Figure 5. Male Indigo Buntings. Left is a second year male (born the previous calendar year); right shows after second year male (born ≥two calendar years before). Second year male Indigo Buntings show more brown coloration in their overall plumage. Photograph by Thomas Blevins.

Figure 6. Male (left) and female (right) adult (after hatch year) Kentucky Warblers. Note the more extensive black face mask and gray crown feathers of male. Photograph by Fields Falcone.

Figure 7. Hatch year (born in current year) Northern Cardinal male receiving an aluminum USGS band. Note black on bill and red-orange tie dye appearance of body plumage which characterizes this bird's age and sex. Photograph by Thomas Blevins.

Figure 8. Brood patch on female Yellow-breasted Chat. During incubation, birds lose the feathers on their lower abdomen to provide more direct heat to eggs and young. Photograph by Mitchell Robinson.

Assessment protocol to evaluate vegetation type and structure (Nott et al. 2003). Breeding status was recorded for all birds detected during the banding session, employing methods similar to those used for Breeding Bird Atlas surveys (e.g., Mass Audubon 2008).

All data were entered into the computer program MAPSPROG (Froehlich et al. 2006). This program vetted all banding, effort, and breeding status data to verify coding and consistency of banding and species records (Albert et al. 2016). We also uploaded our MAPS data into Bandit, the software program administered by the USGS Bird Banding Lab to catalog all banded birds in the USA and Canada.

Data Analysis

Productivity rates were calculated from the proportions of young and adults captured for six species in which we captured ≥30 aged unique individuals in both years combined: White-eyed Vireo (*Vireo griseus*; n = 49), Carolina Wren (*Thryothorus ludovicianus*; n = 34), Yellow-breasted Chat (*Icteria virens*; n = 88), Common Yellowthroat (*Geothlypis trichas*; n = 50), Northern Cardinal (*Cardinalis cardinalis*; n = 30), and Indigo Bunting (*Passerina cyanea*; n = 84). Differences in productivity between species and year were tested using a two-way ANOVA that included species and year as independent variables. This test was performed using the R statistical computing package (v 2.1, Boston, MA, USA). To compare the productivity differences (numerical response variables) of the six species across the three geographic scales (SPAC, SCP BCR, entire breeding range of each species; categorical predictors), we performed a Welch's t-test using Microsoft Excel software. This test was appropriate because the samples were of unequal size and had unequal variances. We tested for significance using $\alpha = 0.05$ (95% confidence interval).

RESULTS AND DISCUSSION

We collected data from 322 banded birds comprising 35 species during 2017 (Appendix Table 1). Total net hours for 2017

was 640.50, resulting in a capture rate of 0.503 birds per net hour. We collected data from 285 birds comprising 32 species during 2018 (Appendix Table 1). Total net hours for 2018 was 654.84, resulting in a capture rate of 0.435 birds per net hour. These numbers include all newly banded birds plus unique recaptures (birds not banded during the current MAPS season), but they do not include unbanded birds: Ruby-throated Hummingbirds (20 in 2017, 11 in 2018) and birds that escaped or were released before banding (20 in 2017, 19 in 2018). The total species captured for both years was 40. Overall productivity results show that in 2017, 20.2% of our captures were hatch year birds from 19 species. In 2018, 16.5% of our captures were hatch year birds from 20 species.

Mean productivity at SPAC varied by species (ANOVA; $F_{5,6} = 6.083$, $p = 0.035$) but not by year (ANOVA; $F_{1,6} = 0.424$, $p = 0.543$; Figure 9). Though not significant, Common Yellowthroat productivity varied the most between years (SD = 0.114) by increasing from 2017 to 2018. Northern Cardinals showed a slight non-significant decrease in productivity from 2017 to 2018 (SD = 0.078). Mean productivity observed at SPAC for all six species combined did not differ significantly from that observed at the SCP BCR (ANOVA; $F_{5,6} = 1.87$, $p = 0.055$) or the entire breeding range for all species (ANOVA; $F_{5,7} = 1.41$, $p = 0.100$).

In 2018, we determined the MAPS banding station habitat composition: 62% was lowland or submontane cold-deciduous forest dominated by red and white oaks (*Quercus* sp.) and musclewood (*Ostrya virginica*); 25% was temperate cold-deciduous shrubland dominated by sweetgum (*Liquidambar styraciflua*), sawtooth blackberry (*Rubus argutus*), and Canada goldenrod (*Solidago canadensis*); 13% of the banding station was tall sod temperate grassland dominated by big bluestem (*Andropogon gerardii*), broomsedge bluestem (*Andropogon virginicus*), sawtooth blackberry, and Canada goldenrod.

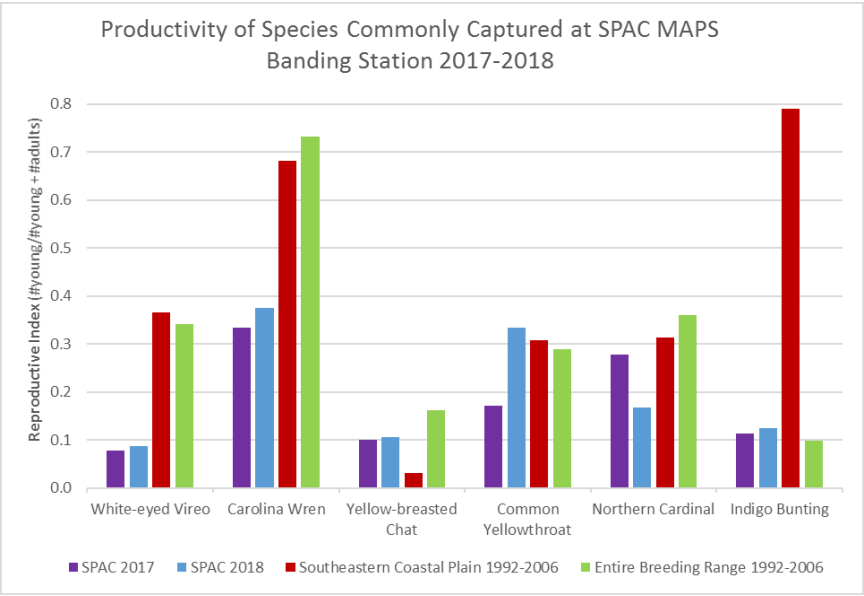

Figure 9. Productivity means of the six most commonly captured species (n ≥30 for each species) at SPAC MAPS banding station during 2017-2018, and their respective productivity means across the SCP BCR (1992-2006) and their entire breeding range (1992-2006).

Our breeding status survey effort varied between 2017 and 2018 as we developed the monitoring protocol. Consequently, I do not present the results or analysis here.

Plans for Future Research

SPAC MAPS 2017-2018 productivity data should be considered lightly as it is too soon to use these data to create definitive assumptions of SPAC's productivity levels of breeding birds compared to their respective larger breeding ranges. It is important to also emphasize that productivity is only one of a few

important vital rates that drive populations. For example, Yellow-breasted Chats may have high productivity at SPAC, but their recruitment and adult survivorship could be low; thus their population at SPAC could be declining.

Ultimate, long-term goals for SPAC MAPS research are to identify sources of population change, to prescribe conservation management to address population declines, and to measure the effectiveness of implemented conservation approaches (DeSante 2000). After the 2020 MAPS field season, we will send our four-year dataset to IBP statisticians. They will evaluate data using capture-mark-recapture models and general linear mixed models to measure population change, adult apparent survival probability, residency, recruitment, index of adults per station, index of young birds per station, productivity, and post-breeding effects across space and time (Albert et al. 2016). We will use the results provided by IBP to interpret SPAC demographic parameters compared to similar parameters across various geographic scales.

Additionally, we have plans to augment SPAC MAPS results with SPAC breeding bird survey data collected intermittently from 2006 through 2017, to compare results. SPAC breeding bird surveys, modeled using North American Breeding Bird Survey methodology (Sauer et al. 2013) modified to fit SPAC's size and research needs, consist of 10-min point counts for all birds conducted once per breeding season at selected points. Several are located within or near the MAPS banding station.

In conclusion, we will continue to conduct habitat surveys once every five years across the banding station. We will collect several years of point count survey and MAPS data before analyzing and reporting breeding bird-habitat relationships at SPAC. We foresee that results from this comprehensive data collection and interpretation will help guide conservation management actions that target integral life stages for birds at SPAC. We are hopeful that our data will be a useful part of the

larger pool of vital rates data used by research institutions, conservation groups, local and regional government offices, and other non-profit organizations to understand the demographic elements of declining bird populations and to facilitate cooperative conservation.

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APPENDIX

Appendix Table 1. Species captured during SPAC MAPS 2017 and 2018. Most of the species caught were common breeders among the varied habitats within the banding station.

Species	# Adults/young processed 2017[1]	# Adults/young processed 2018[1]
Yellow-billed Cuckoo (*Coccyzus americanus*)	2/0	0/0
Ruby-throated Hummingbird (*Archilochus colubris*)[2]	0/0	1/0
Downy Woodpecker (*Dryobates pubescens)*	0/1	1/1
Great Crested Flycatcher *(Myiarchus crinitus*)	0/0	4/0
Eastern Kingbird (*Tyrannus tyrannus*)	0/0	1/0
Eastern Wood-Pewee (*Contopus virens*)	3/5	7/1
Acadian Flycatcher (*Empidonax virescens*)	12/1	10/1
Eastern Phoebe (*Sayornis phoebe*)	5/2	0/1
White-eyed Vireo (*Vireo griseus*)	24/2	21/2
Yellow-throated Vireo (*Vireo flavifrons*)	1/0	0/0
Red-eyed Vireo (*Vireo olivaceus*)	3/0	3/0
Carolina Chickadee (*Poecile carolinensis*)	2/0	0/1
Tufted Titmouse (*Baeolophus bicolor*)	5/2	4/3

Species	# Adults/young processed 2017[1]	# Adults/young processed 2018[1]
Carolina Wren (*Thryothorus ludovicianus*)	12/6	10/6
Blue-gray Gnatcatcher (*Polioptila caerulea*)	1/0	1/0
Eastern Bluebird (*Sialia sialis*)	5/0	5/0
Wood Thrush (*Hylocichla mustelina*)	6/2	17/1
American Robin (*Turdus migratorius*)	0/1	0/0
Brown Thrasher (*Toxostoma rufum*)	0/1	0/0
Northern Mockingbird (*Mimus polyglottos*)	1/0	0/0
American Goldfinch (*Spinus tristis*)	6/0	4/0
Eastern Towhee (*Pipilo erythrophthalmus*)	1/0	5/3
Field Sparrow (*Spizella pusilla*)	8/0	6/1
Yellow-breasted Chat (*Icteria virens*)	45/5	34/4
Orchard Oriole (*Icterus spurius*)	6/12	3/1
Brown-headed Cowbird (*Molothrus ater*)	0/0	1/0
Worm-eating Warbler (*Helmitheros vermivorum*)	0/0	0/1
Louisiana Waterthrush (*Parkesia motacilla*)	5/0	3/3

Species	# Adults/young processed 2017[1]	# Adults/young processed 2018[1]
Black-and-white Warbler (*Mniotilta varia*)	0/2	0/0
Prothonotary Warbler (*Protonotaria citrea*)	3/0	1/0
Kentucky Warbler (*Geothlypis formosa*)	10/4	10/1
Common Yellowthroat (*Geothlypis trichas*)	24/5	14/7
Hooded Warbler (*Setophaga citrina*)	1/0	0/0
Northern Parula (*Setophaga americana*)	1/0	1/0
Yellow Warbler (*Setophaga petechia*)[3]	1/0	0/0
Prairie Warbler (*Setophaga discolor*)	6/1	7/0
Summer Tanager (*Piranga rubra*)	5/3	9/1
Northern Cardinal (*Cardinalis cardinalis*)	13/5	10/2
Blue Grosbeak (*Passerina caerulea*)	1/0	5/0
Indigo Bunting (*Passerina cyanea*)	39/5	35/5

[1]Includes all newly banded birds and novel recaptures (i.e. birds not banded within named MAPS season). Birds that we were unable to age (n = 6 from 2018 MAPS banding) are not included in Table 1 or in 2018 population productivity estimate; they are included in total birds processed.
[2]We captured many Ruby-throated Hummingbirds at our SPAC MAPS station, but we released them unbanded. This single 2018 record was for a female that was a foreign recapture (not banded at our station) for which we did record data.
[3]Late migrant; likely did not breed at SPAC.

CHIMNEY SWIFT (*CHAETURA PELAGICA*) USE OF BRIDGE DEBRIS DEFLECTOR COLUMNS - ADDITIONAL NOTES

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Bridge debris deflector columns are a bridge support design important for bats, and Chimney Swift (*Chaetura pelagica*) nesting activity in bridge debris deflector columns has been previously reported for Panola and Jefferson counties, Mississippi (Coleman and Schuhmann 2017). During late June 2018, Becky Rosamond with the U.S. Fish and Wildlife Service surveyed a bridge debris deflector column for bats in Sunflower County. Rafinesque's big-eared bats (*Corynorhinus rafinesquii*) had previously used these deflectors, but none were observed during this survey. There was, however, an occupied nest with young, screeching Chimney Swifts. Neither the number of young nor the exact placement of the nest were recorded.

On 14 August 2018, Rosamond surveyed a bridge in Montgomery County with two deflectors. A large maternity colony of about 1,100 individual southeastern myotis (*Myotis austroriparius*) occupied the northwestern deflector, and there was an unoccupied Chimney Swift nest adjacent to the bat clusters (Figure 1). About 12 Rafinesque's big-eared bats were found roosting in the deflectors as well.

Figure 1. Chimney Swift nest (circled) next to a large southeastern myotis maternity colony within a debris deflector column on 14 August 2018 in Montgomery County, Mississippi.

LITERATURE CITED

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BILOXI BACK BAY BIRDING

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One of my favorite birding spots on the Mississippi Coast, when most other areas are quiet and I really need a bird fix, is Biloxi Back Bay. Here, Back Bay Blvd. is well known as an eBird Hotspot. Another great route is the nearby Bayview Avenue. These roads run east and west along the southern part of the Biloxi Bay and hold their prime birding between the east side of I-110 and the Biloxi-Ocean Springs bridge. A particularly good birding spot within the area, which has flats along the bay edges at low tide, is on Bayview Avenue. This area can be accessed by going west at the north end of Oak Street, where a dirt turnaround north of a seafood factory provides parking. From here, you can scope the bay or walk west along the road to an old abandoned bridge overlooking the marsh.

Other key areas of interest can be found near the seafood factories that front the bay. If you can handle the occasional smells, you might just happen upon a few fun bird sightings. Some of these seafood processing plants have pipes that empty the seafood spoils into the bay, where a variety of birds hold their feeding frenzies. The spoils also draw in a lot of fish, which the Ospreys (*Pandion haliaetus*) and Bald Eagles (*Haliaeetus leucocephalus*) enjoy.

No matter the season, great birding awaits. While most places might be slow during the summer, I often see a Magnificent Frigatebird (*Fregata magnificens*) circling high above the bay when that random squall line blows through along the Coast. The Biloxi Back Bay is also an annual summer nesting area for both Barn and Cliff swallows (*Hirundo rustica* and *Petrochelidon*

pyrrhonota, respectively). Late summer and fall usually bring in large numbers of White Ibises (*Eudocimus albus*), egrets, herons, pelicans and terns. During the winter months, a good variety of waterfowl show up eagerly waiting for the daily flow of seafood. Some of them have included Northern Pintails (*Anas acuta*), Lesser and Greater scaup (*Aythya affinis* and *A. marila*, respectively), Ring-necked Ducks (*Aythya collaris*), Redheads (*Aythya americana*), Northern Shovelers (*Spatula clypeata*), Mottled Ducks (*Anas fulvigula*), Buffleheads (*Bucephala albeola*), Common Loons (*Gavia immer*), grebes, and Hooded and Red-breasted mergansers (*Lophodytes cucullatus* and *Mergus serrator*, respectively). Bald Eagles are also on the scene during this time looking for any opportunity to prey on either fish or waterfowl, so you never know what encounters await you. Also during winter, Herring, Franklin's and Bonaparte's gulls (*Larus argentatus*, *Leucophaeus pipixcan*, and *Chroicocephalus philadelphia*, respectively) may stop by to enjoy this secret Back Bay buffet. Along the edges of the bay where spoiled water has settled in the grassy areas around the factories, it is often very buggy. In these spots I have found a variety of shorebirds feeding, some of which included Baird's, Buff-breasted and Least sandpipers (*Calidris bairdii*, *C. subruficollis*, and *C. minutilla*, respectively), and both yellowlegs. Be sure to check the skies for raptors that frequent the area. Tall grasses along the roads are also great places to find sparrows.

If you are visiting or live near the Mississippi Coast, a birding trip to Biloxi Back Bay is well worth the stop.

BIRDS AROUND THE STATE: SPRING-SUMMER 2018

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The following is a summary of noteworthy bird sightings in Mississippi for spring and summer 2018 (1 March-31 July 2018). The sequence of information in each account is: species, number, date, place, observer(s), and significance. Numbers of birds sighted are underlined. The significance of sightings is indicated by letters in parentheses following a record. These letters are as follows: (Ac) = accidental, (Ca) = casual, (E) = early date, (L) = late date, (N) = unusually large number, (R) = species rare in area, (RS) = species rare in that season, (U) = species uncommon in area, (US) = species uncommon in that season. Other abbreviations used include the following: ad = adult, Co. = County, cos. = counties, f = female/s, imm = immature(s), m = male(s), m.ob. = many observers, mi. = mile(s), MSU = Mississippi State University, NWR = National Wildlife Refuge, Rd. = Road, S.L. = Sewage Lagoon, and WMA = Wildlife Management Area. The list of sightings is followed by a key to observers' initials and a gazetteer of localities.

Contributions of records are welcome from anyone who makes observations of Mississippi birds. Only with the assistance of many individuals from throughout the state over a period of years can we come to understand the dynamics of the bird populations of Mississippi. Contributors should submit records on 3" x 5" cards or similar-sized slips of paper with one record per card including the following information: species, number seen,

date (including year), location (state, county, and specific location), observer(s), and details and significance of the observation. Very unusual records should be accompanied by full details including description of bird, details of observation, and explanation of how similar species were eliminated. While records are welcome at any time, those received by 15 March, 15 June, 15 August, and 15 December will be submitted with the seasonal report to North American Birds (formerly known as Audubon Field Notes and American Birds), and will also be considered for use in *The Mississippi Kite*. Please send all records to:

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BLACK-BELLIED WHISTLING-DUCK -- 2, 25 Apr., Columbus Lake, Lowndes Co., PM (R); 2-4, 22 Jun.-8 Jul., Noxubee NWR, Noxubee Co., MP, JH, TS, MS, LT, m.ob. (R)

GADWALL -- 1 m, 1 f, 13-28 Jun., Stan Tabor Rd., TS (RS)

RING-NECKED DUCK -- 1 m, 1 f, 15 May-28 Jun., Oktibbeha Co. Lake, TS (RS); 1 m, 3 Jun., Prairie Point Rd., Noxubee Co., TS (RS)

BLACK SCOTER -- 1, 18 Mar., Broadwater Marina, Biloxi, HC, BJ (R)

LONG-TAILED DUCK -- 1, 10 Mar., Biloxi, HC (R)

RUDDY DUCK -- 1-3 m, 3 f, 1 Jun.-24 Jul., West Point S.L., TS, MS, MP, BJ (RS)

INCA DOVE -- 1, 6 Mar., Greenwood, HB (R); 3, 31 Mar., Diamondhead, HC, LM (R)

WHITE-WINGED DOVE -- 1, Mar., Greenwood, HB (R); 2-30, May-Jul., Greenville, FJS (R)

RUFOUS HUMMINGBIRD -- 1 ad f, winter-24 Mar., Ables residence, Mayhew, IBA, MS, MP (R)

KING RAIL -- 2, 18 Jul., Pearl River WMA, Madison Co., LT (U)

PURPLE GALLINULE -- 1-6, 8 Apr.-fall, Loakfoma Lake, Noxubee Co., KH, TN, PM, MP, LT (R); 4-6, 22 May-fall, Bluff Lake, Noxubee Co. , JH, TS, MS, MP, LT (R)

COMMON GALLINULE -- up to 15, 7 Apr.-fall, Loakfoma Lake, Noxubee Co., JH, MP, MS, m.ob. (R); up to 4, 21 May-fall, Bluff Lake, Noxubee Co. , LG, TO, LT (R); 2-5 (2 ad, 3 imm), 2 Jun., 21 Jul., Tupelo Water Treatment Facility, WP (R)

AMERICAN COOT -- 1, 2-26 Jun., West Point S.L., TS, MS (RS); 2, 13 Jun.-28 Jul., Stan Tabor Rd., TS, JH, MS (RS)

BLACK-NECKED STILT -- 1, 26 Jul., Stan Tabor Rd., JH, MS, MP (R)

AMERICAN AVOCET -- 1, 30 Jul., White's Creek Lake, Webster Co., TS, MS, JH, BD, SG (R)

BLACK-BELLIED PLOVER -- 1, 9 May, Stan Tabor Rd., TS (RS)

UPLAND SANDPIPER -- 3, 22 Apr., MSU North Farm, Oktibbeha Co., MS, TS, JH (U)

DUNLIN -- 1, 15 Apr., Catalpa Creek bottoms, Lowndes Co., PM (RS)

WHITE-RUMPED SANDPIPER -- 2, 13 Jun., Stan Tabor Rd., TS (L)

BUFF-BREASTED SANDPIPER -- 1, 24 Apr., Harrah's Casino green space, Biloxi, HC (R)

SEMIPALMATED SANDPIPER -- 1, 15 Jun., Stan Tabor Rd., TS (L)

SHORT-BILLED DOWITCHER -- 12, 5 May, Stan Tabor Rd., JH, MS, PM, IB, MP, LC (RS)

LONG-BILLED DOWITCHER -- 85, 15 Apr., Catalpa Creek bottoms, Lowndes Co., JH, TS, RL, KL (RS); 48, 22 Apr., Catalpa Creek bottoms, Lowndes Co., JH (RS)

WILLET -- 10, 30 Apr., Oktibbeha Co. Lake, MS, TS (R); 18, 30 Apr., Bluff Lake, Noxubee Co., PM (R)

LAUGHING GULL -- 2, 29-31 May, Columbus Lake, Lowndes and Clay cos., TS (R)

GLAUCOUS GULL -- 2, winter-17 Mar., Pass Christian harbor, HC (Ca) [Review List Species]

LEAST TERN -- 1 ad, 26 Jun., West Point S.L., TS, MS, BP (E)

WOOD STORK -- 1, 27 May, Stan Tabor Rd., JH (U, E); up to 44, 2 Jun.-28 Jul., Noxubee NWR, Noxubee and Winston cos., IB, TS, MS, m.ob. (U); 2, 10 Jun., Columbus Lake, Lowndes Co., RS (U); 2, 17 Jun., Sessums Rd., Oktibbeha Co., JH (U); up to 75, 19 Jun.-28 Jul., Stan Tabor Rd., TS, MS, JH, MP (U); 6, 23 Jun., near Brooksville, JW (U); 2, 30 Jun., 4 mi. northwest of Brooksville, NP, PK (U); 4, 30 Jun., Black Prairie WMA, Lowndes Co., NP, PK (U); 1, 7 Jul., near Macon, RB (U); 8, 13 Jul., Sessums Rd., Lowndes Co., TS (U)

ANHINGA -- 1, 6 Mar.-12 May, White's Slough, Lowndes Co., JO, PM (U); up to 27, 15 Mar.-fall, Noxubee NWR, Noxubee, Oktibbeha, and Winston cos., JH, MP, TS, MS, m.ob. (U); 1, 4, 9 Apr., Big Black Creek bottoms, Choctaw Co., TS, MS, IB (R); 1, 11 Apr., 2 May, Plymouth Bluff, PM, JO (U); 1, 13 Apr., Oktoc, Oktibbeha Co., JH (U); 1, 21 Jun., Columbus Lake, Clay Co., TS (U); 2, 7 Jul., 5 mi. southwest of Okolona, WP (R); 2, 23 Jul., Eupora, IB, MS (R)

AMERICAN WHITE PELICAN -- up to 128, 1 Jun.-31 Jul., Oktibbeha Co. Lake, TS, m.ob. (US)

AMERICAN BITTERN -- 1, 2 Apr., Big Black Creek bottoms, Choctaw Co., WM (U)

BLACK-CROWNED NIGHT-HERON -- up to 66, 9 Apr.-30 Jun., Bluff Lake, Noxubee Co., JH, BD, m.ob. (U); up to 8, 22-29 Jun., Brooksville, JH, BD, m.ob. (U); up to 4, 22 Jun.-20 Jul., 7 mi. west of Brooksville, JH, BD, m.ob. (U)

YELLOW-CROWNED NIGHT-HERON -- up to 3, 21 May-34 Jun., Noxubee NWR, Noxubee and Winston cos., LG, MP, TS, m.ob. (U)

ROSEATE SPOONBILL -- up to 9, 21 May-16 Jun., Noxubee NWR, Noxubee and Winston cos., LG, SR, RSn, TS (R)

OSPREY -- 2 ad, 2 imm, winter-21 Jun., Columbus Lake, Lowndes Co., TS, MS (R nesting species); 2 ad, 1 imm, 19 Apr.-21 Jun., 8 mi. east of West Point, TS (R nesting species)

WHITE-TAILED KITE -- 1, 2 Mar., Ashland, TD (Ac) [Review List Species]

BALD EAGLE -- 2 ad, 1 imm, 4 Mar.-31 May, Oktibbeha Co. Lake, TS (R nesting species); 2 ad, 1 imm, 8 Mar.-28 Apr., Noxubee NWR, Noxubee Co., LCr (R nesting species); 2 imm, 21 Jun., Officer's Lake, Columbus, TS (R nesting species)

CRESTED CARACARA -- 1, 13 Jun., near Vicksburg, TE (Ac) [Review List Species]

PEREGRINE FALCON -- 1, 7 Apr., Bluff Lake, Noxubee Co., IB (R)

WESTERN KINGBIRD -- 1, 4 Mar., Broadwater Sun Golf Course, Biloxi, HC (R)

SCISSOR-TAILED FLYCATCHER -- 1, 28 Apr., Seaman Rd. S.L., Jackson Co., HC (R); 1-3, 2 May-24 Jun., Sessums Rd., Oktibbeha Co., JH, MS, MP, m.ob. (R); 1 m, 8 May, Paulette Rd., Noxubee Co., JH (R); 1 f, 15-19 Jun., near Artesia, TS, JH, MP (R)

ALDER FLYCATCHER -- 1, 18 May, Conger Rd., DeSoto Co., HC, HM, RP, RH (R)

WILLOW FLYCATCHER -- up to 2, 8 May-19 Jun., Stan Tabor Rd., JH, TS, ND, m.ob. (R, E); 1, 8 May-8 Jun., Paulette Rd., Noxubee Co., JH, TS, PM (R, E); 1, 4-5 Jun., Columbus Lake, Clay Co., PM (R)

WHITE-EYED VIREO -- 1, 4 Mar., Prairie Waters, Lowndes Co., JH (RS)

PHILADELPHIA VIREO -- 1, 24 Apr., Jeff Busby Park, Choctaw Co., MS (US, E); 1-2, 27 Apr.-3 May, Plymouth Bluff, PM, JO (US); 1, 28 Apr., Section Line Rd., Columbus, PM (US); 1, 1 May, Oktibbeha Co. Lake, MS (US)

WARBLING VIREO -- 1, 21 Apr., Oktibbeha Co. Lake, MS (U); 1, 16 May-5 Jun., Columbus Lake, Clay Co., MS, TS, JH, PM (R nesting species)

CAVE SWALLOW -- 1, 30 Mar., near Bayou Caddy, Bay St. Louis, HC (R)

SWAINSON'S THRUSH -- 2, 19 Apr., Plymouth Bluff, PM (E); 1, 19 Apr., Columbus Riverwalk, PM (E)

HERMIT THRUSH -- 1, 27 Apr., Plymouth Bluff, PM (L)

PINE SISKIN -- 2, 16 May, Copeland residence, Winston Co., MC (L)

BACHMAN'S SPARROW -- up to 3, 17 Mar.-27 Jun., Noxubee NWR, Winston Co., JH, MP, PM, m.ob. (U)

LARK SPARROW -- 2, 19 Apr., Judge Thomas Rd., Clay Co., TS, PM (U); 4, 19 Apr.-22 May, MSU North Farm, Oktibbeha Co., JH,

MS, PM, m.ob. (U); 3, 27 Apr.-26 Jul., Stan Tabor Rd., JH, TS, MS, m.ob. (U); 1-2, 27 Apr.-3 Jun., Prairie Point Rd., Noxubee Co., JH, TS, MS (U); 1, 4 May, Red Bud Rd., Lowndes Co., JH (U); 2, 15 May, Glenn Rd. x Moore Cutoff Rd., Noxubee Co., PM (U); 1, 16-20 May, Paulette Rd., Noxubee Co., LG (U); 2, 3 Jun., Rock Hill Rd., Noxubee Co., TS, MS (U); 1, 3 Jun., East Skinner Rd., Noxubee Co., TS, MS (U); 1, 9 Jun., Firetower Rd., Lowndes Co., JH (U); 2, 17 Jun.-10 Jul., near Artesia, JH, TS (U)

GRASSHOPPER SPARROW -- 1, 18 May, Buck Island Rd., Tunica Co., HC, HM, RH (R); 1, 18 May-21 Jun., Judge Thomas Rd., Clay Co., TS, MS (R); 2, 30 May, Old Vinton Rd., Clay Co., TS, MS (R)

LINCOLN'S SPARROW -- 1, 18 May, Conger Rd., DeSoto Co., HC, HM, RP, RH (R)

BRONZED COWBIRD -- 2, 20 Apr., 5 May, Broadwater Golf Course, Biloxi, HC (R)

GOLDEN-WINGED WARBLER -- 1, 28 Apr., Plymouth Bluff, MP, PM (R)

PROTHONOTARY WARBLER -- 1, 21 Mar., Noxubee NWR, Noxubee Co., JO (E)

SWAINSON'S WARBLER -- 5, 6 Apr.-16 May, Moore's Creek Rd., Lowndes Co., PM, DP, TS, m.ob. (U); 2, 7 Apr.-13 May, Nash Rd., Lowndes Co., PM, JH (U); 4, 10-28 Apr., Section Line Rd., Lowndes Co., PM (U); up to 5, 11 Apr.-23 Jun., Plymouth Bluff, JO, PM, MS, m.ob. (U); 3, 12 Apr.-7 May, Natchez Trace Parkway, Choctaw Co., MS, TS, DP (U); 1, 17 Apr., Edmond's Bridge Rd., Noxubee Co., JH (U); 1, 20 Apr., Bright Rd., Choctaw

Co., MS, DP (U); 1, 23 Apr.-12 May, Morris Rd., Oktibbeha Co., IB, JD (U); 1, 25 Apr., Natchez Trace Parkway, Webster Co., MS (U); 1, 27 Apr., P.D. Fulgham Rd., Oktibbeha Co., MS (U); 2, 28 Apr., Old West Point Rd., Lowndes Co., TS, MS (U); 3, 4 May, Oktibbeha Co. Lake, TS, NG (U); 2, 11 May, Self Creek Rd. x Brown Rd., Oktibbeha Co., MS (U); 3, 12 May, Longview-Adaton Rd., Oktibbeha Co., IB, JD, TS, MS (U); 1, 12 May, Brown Rd., Oktibbeha Co., TS, MS (U); 1, 12 May, Read Rd., Oktibbeha Co., TS, MS (U); 2, 12 May, Hickory Grove Rd., Oktibbeha Co., DP, JP (U); 1, 13 May, Columbus Lake, Lowndes Co., JH (U); 1, 15 May-6 Jul., Bluff Lake Rd., Winston Co., TS (U); 1, 20 May, Bluff Lake, Noxubee Co., HM, RH, BF (U); 1, 21 May, Section Line Rd., Winston Co., HM, RH, BF (U); 1, 31 May-1 Jun., Daniel Lake, Oktibbeha Co., MS, IB, JH (U); 1, 1-16 Jun., Noxubee NWR entrance road, Oktibbeha Co., TS (U); 1, 1 Jun., Old Vinton Rd., Clay Co., MS, PM (U); 1, 4 Jun., Billy White Rd. x Sun Creek, Clay Co., TS (U); 2, 5-26 Jun., Friendship cemetery, Columbus, PM (U); 1, 10 Jun., Old Cove-Heath Rd., Webster Co., TS, MS (U); 1, 10 Jun., Knight Rd., Webster Co., TS, MS (U); 1, 28 Jun.-1 Jul., River Rd., Oktibbeha Co., JH, NP, PK (U); 3, 1 Jul., Cape Creek Rd., Choctaw Co., WM (U); 1, 2 Jul., Robinson Rd., Oktibbeha Co., TS (U); 1, 7 Jul., Bluff Lake Rd., Winston Co., TS, MS (U)

TENNESSEE WARBLER -- 1, 1 Apr., Section Line Rd., Columbus, PM (E)

NASHVILLE WARBLER -- 1, 17, 28 Apr., Section Line Rd., Columbus, PM (U); 1, 25 Apr., Jeff Busby Park, Choctaw Co., TS, MS (U); 1, 26, 28, 29 Apr., Plymouth Bluff, JO, PM, TS, MS (U)

MOURNING WARBLER -- 1, 18 May, Tunica Co. River Park, HC, HM, RP, RH (Ca) [Review List Species]

KENTUCKY WARBLER -- 1, 4 Apr., Big Black Creek bottoms, Choctaw Co., TS (E)

CERULEAN WARBLER -- 1, 9, 11, 24 Apr., Old French cemetery, Biloxi, HC (R); 1, 12-29 Apr., Plymouth Bluff, JO, PM (U); 1, 14, 18, 24, 25 Apr., Columbus Riverwalk, PM (U); 1, 22 Apr., Gillespie St., Starkville, JH (U); 1-2, 24-25 Apr., Jeff Busby Park, Choctaw Co., MS, TS (U)

BLACK-THROATED GREEN WARBLER -- 1, 18 Mar., Waverly Mansion Rd., Clay Co., JA (E)

WILSON'S WARBLER -- 2, 18 May, Tunica Co. River Park, HC, HM, RP, RH (R)

WESTERN TANAGER -- 1, 26-29 Jul., Long Beach, BL (Ac) [Review List Species]

PAINTED BUNTING -- 2-3, 2 May-14 Jul., Sessums Rd., Oktibbeha Co., JH, TS, MS, m.ob. (U nesting species); 1 ad m, 4 May, Red Bud Rd., Oktibbeha Co., JH (U nesting species); 1 ad m, 1 f, 5-12 May, Harris Rd., Oktibbeha Co., JH, PM, JPe, LP (U nesting species); 1, 9 May, Paulette Rd., Noxubee Co., TS (U nesting species); 1-2, 12 May-11 Jun., MSU North Farm, Oktibbeha Co., DP, JP, TS, MS, HC (U nesting species); 2-4, 15 May-20 Jul., Stan Tabor Rd., PM,TS, MS, m.ob. (U nesting species); 1, 16 May, Old Vinton Rd., Clay Co., PM (U nesting species); 1, 18 May-21 Jun., Judge Thomas Rd., Clay Co., TS, MS (U nesting species); 1 ad m, 3 Jun., East Skinner Rd., Noxubee Co., TS, MS (U nesting species); 3, 9 Jun., Firetower Rd., Lowndes Co., JH (U nesting species)

Contributors

Ida Belle Ables (IBA), Jim Arnett, Rachel Barham, Isaac Boden, Hilda Brackin, Linda Cambre, Margaret Copeland, Holly Cox, Lawrence Croft (LCr), Joe Diaz, Nancy Donald, Brady Dunaway, Teresa Dunlap, Timothy Evans, Bob Foehring, Neil Gilbert, Libby Graves, Sam Gray, Rob Harbin, Jeffrey Harris, Karen Hogan, Brian Johnston, Peter Kyne, Beverly Lawless, Keats Lewis, Robert Lewis, Paul Mack, Lori McDonald, William McFarland, Hal Mitchell, Teresa Noel, Jimmy Osborne, Tina Overstree, Bill Parker, Michael Parrish, Dianne Patterson, Jim Patterson, Wayne Patterson, Jonathan Peeples (JPe), Levi Peeples, Nicole Phillips, Richard Preston, Marion Schiefer, Terence Schiefer, Randy Schultz, Frank John Serio (FJS), Regina Snow (RSn), Lauren Thead, Janet Wright

Key to Localities

Localities not listed are indexed on the "Official Highway Map of Mississippi" or the county is listed in the main text.

Plymouth Bluff = Lowndes Co.; Stan Tabor Rd. = Noxubee Co.

BRIEF FIELD NOTES

KING RAIL PAIR RESPONSE TO PLAYBACKS

Nicholas A. Winstead - Mississippi Museum of Natural Science, 2148 Riverside Dr., Jackson, MS 39202.

I was reminded of the following account while looking through old notes, and thought it was worth reporting. I conducted secretive marsh bird surveys on the north end of Ross Barnett Reservoir north of Hwy. 43 during summer 2007. One particular survey point along Lake Harbor Rd. in Rankin County on 15 June 2007 had two adult King Rails (*Rallus elegans*) with three black downy chicks. All birds were foraging about 8 m from the edge of the road on an open, narrow mudflat adjacent to some cattails and other marsh vegetation. My survey protocol called for 5 minutes of passive listening, followed by 30 seconds of playbacks and 30 seconds of silence for each of the focal species. Focal species, in order of playback, were Least Bittern (*Ixobrychus exilis*), King Rail, Common Gallinule (*Gallinula galeata*), Purple Gallinule (*Porphyrio martinicus*), American Coot (*Fulica americana*), and Pied-billed Grebe (*Podilymbus podiceps*). The King Rails were initially observed during the final two minutes of passive listening, and remained present throughout the remainder of the playbacks. The birds seemed oblivious to my presence until the King Rail playback began, whereupon both adults vocalized in response to the King Rail recording. The male charged in the direction of the

playback, but stayed hidden in the vegetation at the edge of the road. He gradually walked back to the other birds during the Common Gallinule playback. Interestingly, both adults responded again side-by-side during the Purple Gallinule playback, then the male mounted the female and copulated in front of the chicks. I assume this was an effort to reaffirm the pair bond, though I was surprised to see it occur in response to the Purple Gallinule playback.

MISSISSIPPI KITE FEEDING ON A RED BAT

Bill Hampton - 176 Wildwood Rd., Holly Springs, MS 38654.

I have had a pair of Mississippi Kites (*Ictinia mississippiensis*) that have nested and raised a pair of young for the past two years on our property in Marshall County, Mississippi, just south of the Coldwater River. I spend a lot of mornings drinking my first cup of coffee on our porch, and watching them hunt in the fields. There are several large oaks (*Quercus* spp.) on our property that have been resting spots for them when hunting and training the fledglings.

They normally pluck dragonflies out of the air and eat them in flight. Often, they would fly to one specific oak they seemed to prefer and eat a dragonfly or grasshopper. On the morning of 28 April 2018, I saw one fly into the oak with something larger than normal that I did not recognize. I grabbed my camera, and to my surprise found that it had a red bat (*Lasiurus borealis*). I shot a few photographs (Figure 1), and then backed off to let it enjoy its prize. We regularly see red bats, and have even been seeing them recently on warmer days. I have read that Mississippi Kites will take bats, but I have never seen one with a bat previously.

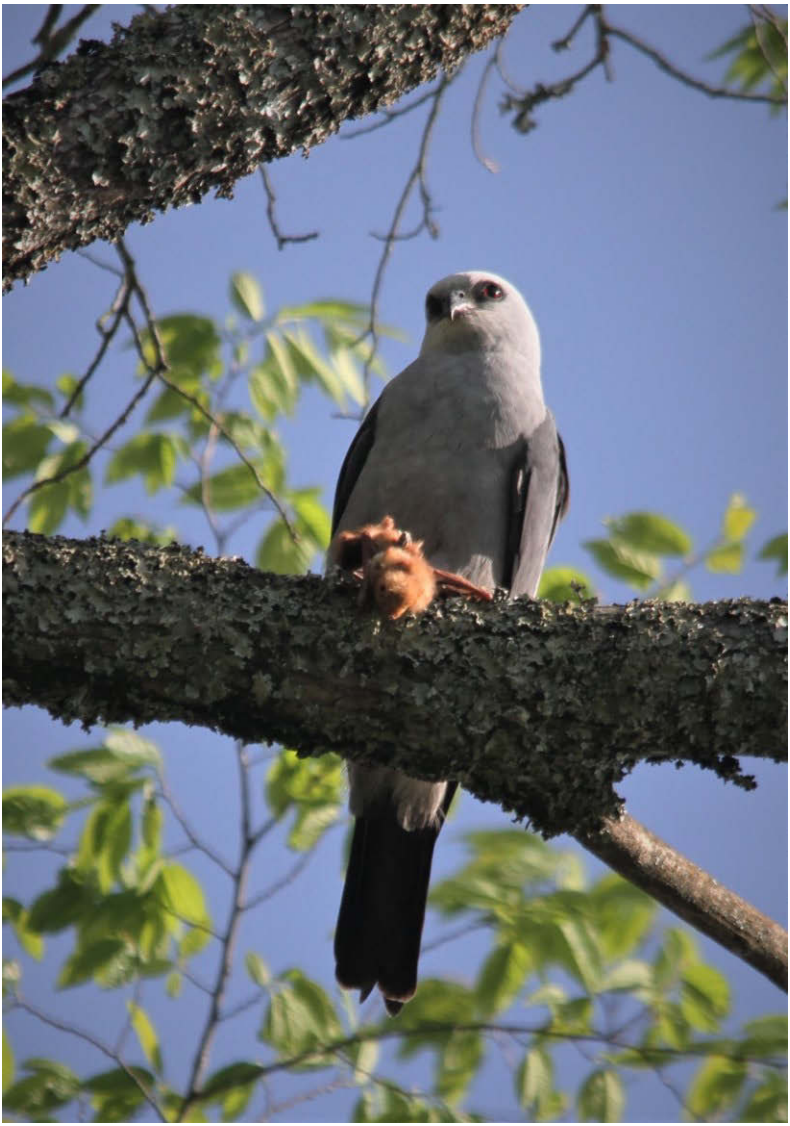

Figure 1. Mississippi Kite with red bat, 28 April 2018, Marshall County, Mississippi.

PURPLE MARTIN USE OF ASIAN CLAMS IN NEST CONSTRUCTION

Nicholas A. Winstead - Mississippi Museum of Natural Science, 2148 Riverside Dr., Jackson, MS 39202.

During February 2014, I erected a Purple Martin (*Progne subis*) gourd rack with six artificial gourds in my yard at Jackson. The first time I observed Purple Martins checking out the gourds was during 2017, though none nested. The first nesting attempt occurred during 2018, when one pair occupied one gourd and fledged young. At the beginning of each nesting season, I lined each gourd with a handful of pine straw. The pair from 2018 added additional nesting material, including mud. Brown and Tarof (2013) state that miscellaneous items are sometimes incorporated into a nest, including aluminum can pull tabs and nails. The pair from 2018 incorporated at least four valves (three whole valves and three partial valves) of Asian clams (*Corbicula* sp.; Figure 1) into the mud they used to build their nest. It is possible these valves were inadvertently picked up with mouthfuls of mud that were brought to the nest, but the largest was 1.5 cm wide and would likely have been the main component of a mouthful taken by a Purple Martin with a mouth width of about 1.5 cm.

Figure 1. Three whole and three partial valves of *Corbicula* sp. incorporated into mud used to construct a Purple Martin nest during 2018, Jackson, MS.

LITERATURE CITED

Brown, C.R. and S. Tarof. 2013. Purple Martin (*Progne subis*), version 2.0. In The Birds of North America, (A.F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY. https://doi.org/10.2173/bna.287.

MISSISSIPPI'S SECOND LIMPKIN RECORD

Karen Dierolf - Mississippi Museum of Natural Science, 2148 Riverside Dr., Jackson, MS 39202.

On 24 September 2018, while collecting fish for the Mississippi Museum of Natural Science (MMNS) with museum colleague Matt Wagner, I saw a Limpkin (*Aramus guarauna*; Figure 1) from a bridge overlooking Big Springs Creek in Marshall County. Wagner also saw the bird. The day was cool and overcast, and it rained later in the day. We were on Potts Camp Road on a fairly high bridge overlooking the creek (34.634102°N, -89.396687°W). The bird was below us, standing on the edge of a back water slough of the creek. It stood about two feet tall, had brown feathers with white spots on its back, a long neck with lighter brown feathers, long grayish colored legs, and a long, tannish brown, slightly downward curved bill. It was not feeding, and seemed very oblivious to our presence. The bird walked along the bank and eventually hopped across the water before disappearing into the underbrush. I did not hear any vocalizations. I was able to take a few pictures and some short video of the Limpkin before it disappeared (video available online under *The Mississippi Kite* Supplemental Files at missbird.org). I knew I had seen this species many years before at Biscayne National Park at Homestead, Florida, but could not recall its name. Upon returning to the museum I showed fellow staff member Bob Jones the

photographs and video, and he struggled for a moment but eventually realized it was a Limpkin. Unfortunately, I did not realize at the time that this was a rare sighting for Mississippi and did not pursue it any further. Several weeks later, Nick Winstead, MMNS ornithologist, approached me about the sighting after hearing about it from Wagner. I showed Winstead the photographs and video and he also confirmed that it was a Limpkin, and encouraged me to submit a report to the Mississippi Bird Records Committee and write this article.

Figure 1. Limpkin at Big Springs Creek bridge at Potts Camp Road, Marshall County, 24 September 2018.

THANK YOU TO THE 2018 REVIEWERS OF *THE MISSISSIPPI KITE*

Nicholas A. Winstead - Mississippi Museum of Natural Science, 2148 Riverside Dr., Jackson, MS 39202.

The Mississippi Kite has benefitted from the keen eye and constructive review of many people. The reviewers listed below have volunteered their expertise during 2018 to help improve the quality of articles submitted to *The Mississippi Kite*, and I am grateful for their help (those whose names are in bold reviewed two or more articles).

Sheena Feist, **Bob Jones**, **Gene Knight**, **Tom Mann**, and **Joe McGee**.

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