

Jefferson County Spring Migration Count -- 13 May 2017

This is the expanded version of the narrative report on the count.

The Migration Count was held on the day after a frontal passage produced winds with a northerly component, resulting in good birding for passerine migrants along the coast and good birding weather for the rest of the county. The result was a final species count of 192, the second highest in the 22 year history of the count, surpassed only by the 197 in 2013. The number of individual birds was just a little low, probably reflecting a very slightly below average number of participants.

We now have a long period of Spring Migration Count results, and we are increasingly able to detect trends in the number of birds we find. The count is a "migration" count, aimed at exploring spring migration over the United States. As such, the timing, on the Saturday of the second full weekend in May, International Migratory Bird Day and Global Big Day, is geared to the peak passage through the northern tier of the United States, and is significantly later than is normally regarded as the peak along the Gulf coast. However, the real story is that weather conditions adverse to trans-Gulf migration are increasingly rare after the last week of April, and the number of birds seen along the coast drops off very quickly. Nevertheless, as the occasional May cold frontal passage amply demonstrates, there are in fact still good numbers of migrants crossing the Gulf, and they will descend into the coastal migrant traps if they encounter adverse conditions; if conditions are normal, most press on further north riding the southern winds which normally prevail. This year, count day turned out to be one of the relatively rare May days when birds descend in numbers on reaching the coast. In the account that follows, in analyzing the results, we paid more attention to species other than the classical neotropical migrants, because the numbers of other species – year round residents, departing winter residents and arriving summer residents – are much less affected by the wind and weather conditions on the day of the count.

We have four principal species of duck that are present year round. Of these, the number of Black-bellied Whistling-Ducks was a normal 85 after last year's exceptional 242. Fulvous Whistling Ducks were a "high normal" 57, as usual mostly in Cattail Marsh, in a year when anecdotal reports suggest the local breeding population is above average. The longer-established Mottled Duck, a species of some significant concern, produced a healthy 46, but this is still below the norms of the 1990s. Blue-winged Teal is the only "local" duck species that winters in significant numbers south of the United States, and as such, numbers found on count day can be quite variable. The 88 seen is actually a relatively low number. Wood Ducks are generally easier to find just north of Jefferson County. This year's high count resulted mostly from finding 11 in the wetlands at the Salt Water Barrier on the Neches River in Beaumont. Other waterfowl seen were basically lingering winterers. Green-winged Teal is unusual by count day, but this year, the reason for the presence of two females in Cattail Marsh is known. These birds each lack one outer wing, and almost certainly cannot fly. Many past

records of Green-winged Teal and perhaps other lingering ducks may well be the result of less obvious physical impairments. This year, the other species included four Lesser Scaup (on Pleasure Island), one Red-breasted Merganser (on the ship channel), and a rather high 19 Ruddy Ducks (on Pleasure Island). None of these were likely to be cripples from hunting activity, however.

Northern Bobwhite is a species that is frequently calling in May in west Jefferson County, and thus more completely censused than it would be at other times of the year. This ground-nesting species has suffered from the ravages of fire ant predation on chicks and the low number this year is further cause for concern.

Least Grebes were not an expected species locally until 2012. The species has a reputation for being secretive, and even if they are present, they may not be located on any given day. However, over the past nine months or so, an increasing population in Cattail Marsh has become very visible and much less secretive and is now raising young for the second time. Eight of the 10 known birds there were recorded on count day. Other grebes are lingering winter residents by mid-May. One or two Pied-billed Grebes is not unusual, but the Eared Grebe on Pleasure Island was the first we have seen on the count.

Neotropic Cormorants were present in high number, although not as high as last year. Anhinga numbers returned to normal after an exceptional number in 2016. Not finding any American White Pelicans was unusual, although this has happened before in the 1990s and early 2000s. Missing them in one year is not a cause for alarm. There were the usual number of Brown Pelicans.

Least Bitterns are found locally in a surprisingly wide variety of locations, almost everywhere there is an adequate area of reeds, as this year. Great Blue Herons are relatively conspicuous because of their size, but total numbers are usually not very high, as this year, if somewhat variable. The numbers of the other herons were mostly very normal. Snowy Egrets have been numerous this winter and spring and a slightly elevated number validates this observation. Little Blue Herons were also somewhat more numerous, especially in Cattail Marsh. There were no Reddish Egrets found along the coast; Jefferson County is apparently just a little east of the nearest population, although we do often find a wandering immature bird in the fall.

Gregarious species such as White Ibis can be expected to vary in numbers significantly from year to year. The White Ibis numbers were a little high, but not particularly concentrated geographically. Dark Ibis were normal, and for the fifth year in a row, Glossy Ibis was recorded. Interestingly, the numbers of this species have remained low since the recognition in the early 1990s that there were a very few around. The Glossy Ibis is usually found away from the large flocks of dark ibis that are common in Southeast Texas. Knowing the full extent of the Glossy Ibis population east of the Atchafalaya in Louisiana is hindered by very unscientific

philosophy in Christmas Counts and by eBird in some counties and parishes that dark ibis not able to be scrutinized closely, or not in a plumage that allows determination, should be defaulted to White-faced Ibis rather than recorded as *Plegadis* species or Glossy/White-faced Ibis.

Vulture numbers were very much normal. Six Ospreys was high for a species that was unknown locally in May until 2008. More may be contemplating nesting south of the historical breeding range. The failure to find a White-tailed Kite, while disappointing, happens on about half of our counts. It is not a cause for concern, and it may be that they are usually sitting on eggs by mid-May. The first ever Swallow-tailed Kite recorded on the spring count was in 2010 and the species has now been recorded on the last four successive counts. This year's bird was seen over Pine Island Bayou at the Edgewater Picnic Area. A few Mississippi Kites were found, as usual, for a species that breeds in vary small numbers locally.

Although a small number of Northern Harriers does over-summer locally, we did not find one this year. Almost all Sharp-shinned Hawks head north for the summer, and we found no lingerers this year. Any *Accipiter* in the late spring and summer is likely to be a Cooper's Hawk and we did record one. Bald Eagles have been nesting in Cattail Marsh since the winter of 2011/12, and are now on their second nest. An immature, presumably this year's offspring, was seen on count day. An adult White-tailed Hawk was seen in west Jefferson County, following sightings of this species in 2014 and 2015. It seems likely that this species is very slowly expanding eastwards. Twenty-three Red-shouldered Hawks was double the recent average, and a longer term view suggests the population is increasing. For many years now, there have typically been two or three breeding pairs of Broad-winged Hawks in Jefferson County, and this year was no exception. Swainson's Hawks have been slowly increasing in numbers since the mid-1990s, but this year's 15, the first time in double figures, was a new high. The species has been slowly expanding eastwards. A few Red-tailed Hawks are still around in mid-May but nine was quite high.

King and Clapper Rails are a part of the local Avifauna. More Clapper Rails are seen than King Rails, but we suspect some significant part of that may be the greater accessibility of the brackish areas that Clapped Rails inhabit. Ignoring such effects, Clapper Rail numbers were normal, King Rail numbers a little low. Virginia Rails, previously recorded in 2013 and 2014 were seen and heard again, perhaps evidencing some increase in population. Inexplicably, Sora was neither seen nor heard last year. This year's 13 was a healthy number and it seems the numbers have increased since the 1990s. There is now a nice population of Purple Gallinules in Cattail Marsh, and likely in the essentially inaccessible areas of McFaddin National Wildlife Refuge. This year's total was a little low, while Common Gallinule numbers were very much normal. Most American Coots move north in summer, but the winter numbers are so large that a small percentage of lingering or impaired birds results in a significant total, as this year's 106.

Black-necked Stilts are very much as part of the year-round scene in Jefferson County and occur widely spread out. American Avocets are traditionally considered as a winter

species, but in recent years, significant numbers have been found in summer. None were seen in Pleasure Island, but there were some in Cattail Marsh. American Oystercatchers were recorded in very low numbers in 2013 and 2014, but the species seems to have retreated and none were found. Most plover numbers were normal – Black-bellied and Wilson's Plovers, and Killdeer. Missing Snowy Plover was disappointing, as we had thought a breeding population was developing along Sea Rim State Park and McFaddin Beach, and it may still be further west along the beach than is easily accessed.

Many sandpipers have left for points north by mid-May. Fifteen Spotted Sandpipers is actually a little low; the species does breed further north, but is essentially absent from the Gulf Coast for only a very short period comprising the whole of June and perhaps the first week of July. Greater Yellowlegs numbers were also slightly low. Lesser Yellowlegs are much more gregarious and usually found in flocks; the numbers counted are quite variable from year to year, depending on how many flocks are noted. However, 24 was the lowest in several years. There were comparatively few rice fields under cultivation or being prepared for planting in west Jefferson County, and this may account for that, and for the low number of Whimbrels and Least and White-rumped Sandpipers. The only Hudsonian Godwits found were two in Cattail Marsh. An exception to the lower numbers of inland sandpipers was a healthy number of Stilt Sandpipers, a species that has been quite numerous all spring. Most Baird's Sandpipers have passed through before count day, but stragglers are detected approximately two-thirds of the time, as this year. Pectoral Sandpipers pass through in much greater numbers, but in a similar time frame, and finding only three is below average. Many Western Sandpipers spend the winter on Gulf Coast beaches, and there were some at the Sea Rim State Park beach, although fewer than was common 15 or 20 years ago. Short-billed Dowitchers are usually mostly gone by count day; this year, none were found. Long-billed Dowitcher numbers were very low, but numbers seen in winter and earlier in the spring suggest that this was merely a case of early departure for the breeding grounds further north. Wilson's Phalaropes can be present in large numbers, but this year, the lack of large amounts of water of the depth preferred by the species seems to have left us with only a very few.

Both Laughing Gull (resident) and Ring-billed Gull (migratory) numbers were normal. It is relatively uncommon to be able to find a Franklin's Gull in Jefferson County, but this probably more reflects the difficulty of picking one out among all the resident Laughing Gulls. One was on the Sea Rim beach on count day. One of the more unusual birds seen on the count was a Glaucous Gull, a first or second winter bird with very worn primaries and coverts, detected and photographed on the beach at Sea Rim. This is only the second record of this species known from Jefferson County – the first was in late December 1995 at the Port Arthur landfill and no further details are available – and is later by one day than the previous latest spring Upper Texas Coast record. A Glaucous Gull photographed on May 21 at Holly Beach, about 30 miles further east, looks essentially identical and was presumably the same bird. Least Terns appear to have been increasing since the early 2000s along the beach, and are now

commonly seen along the ship channel as well. There was a good number of Caspian Terns this year. The species is not unusual, particularly along the beaches, but the numbers recorded are very variable as the flocks may or may not be in accessible locations. Two hundred and eleven Black Terns represents a good number, but by no means a record. It is difficult to understand the movements of this species. They are found along the upper Texas Coast from March to October, even in mid-July, and can be in either breeding or winter plumage at that time, even though the closest breeding range quoted is some 700 miles or so to the north. Two Common Terns were counted along the beach. Typically considered as a migrant species mostly passing through in April and May and even early June and again in September, October and the first half of November; a few are present outside these periods. While the normal issue with identification by birders is calling a bird as one of a rare species when it is in fact a slightly aberrant example of a more common species, the reverse is probably true of Common Tern. Many are undoubtedly passed off as Forster's Terns. Forster's Tern numbers were very normal; Royal Tern numbers were high. Sandwich Terns, present typically only in summer while Royal Terns stay year round, are almost always found in mixed flocks with Royal Terns. A good number were found on the count this year. Good numbers of Black Skimmers were found along the beaches and Pleasure Island, and this species seems to be increasing in our area.

The relatively modest number of Rock Pigeons is in line with recent years, indicating that the increase over the 1998-2008 period has levelled off. Eurasian Collared-Doves first colonized the area in 2000, but 17 is a relatively modest number, although we were not able to cover one or two areas where they concentrate. White-winged Doves are also a relatively recent addition to the area's avifauna, but also seem to have levelled off. Mourning Doves numbers remain stable even though the arrival of other dove species caused most of them to forsake the urban areas for the open areas of the county. Inca Doves on the other hand, have become relatively scarce in the last few years, after first colonizing the area in the 1990s.

We find a remarkable number of owls on these migration counts. One pair of Barn Owls is in the same private location year after year. One or two Eastern Screech-Owls and Great Horned Owls are normal; the number of Barred Owls seems to be increasing.

Common Nighthawks locally are concentrated just inland of the shoreline, but also occur in urban areas where there are lights at night, and were somewhat reduced this year. There are no longer the large communal Chimney Swift roosts that were commonplace in the 1990s, but are otherwise found in all the other unusual places. A few Ruby-throated Hummingbirds breed in the northern part of the county, but by count time they are often sitting on eggs and difficult to detect. Two was quite low. Most Belted Kingfishers have gone north to breed by count day; three is unusually high.

It is now nearly nine years since Hurricane Ike, and the increase in woodpecker habitat has presumably run its course, as severely damaged trees have fallen or been felled, and the cavities caused by limb loss or damage have mostly healed. Red-headed Woodpeckers, the species most partial to dead

trees, were not quite as numerous as in recent years. The numbers of the other three species, Red-bellied, Downy and Pileated Woodpeckers, were within norms.

No "true" falcons were seen this year, but Crested Caracaras, a species recently removed from affinities with hawks to affinities to falcons, continue to increase, hitting double figures this year for the first time.

Two species of flycatcher are routinely present in significant numbers in the summer – Eastern Kingbird and Scissor-tailed Flycatcher. These species are actually closely related, and occupy the same habitat niche, but they are not present in high enough numbers to be in any danger of crowding each other out. Eastern Kingbird numbers were elevated because of late migrants still arriving along the coast. This has been a good year for Western Kingbirds, and four were found on count day. The county is very close to the eastern edge of the breeding range, and so the number present tends to be very variable. Unlike the kingbirds and Scissor-taileds, which are open country birds; Great Crested Flycatchers are woodland birds, and were present in slightly low numbers. The other flycatchers are migrant species, and were included in the coastal arrivals on count day. Also, there was an apparently elevated number of Acadian Flycatchers, which breed from the northern part of the county northwards, as migrants supplemented the already-on-territory birds. The easiest small flycatcher to identify – Eastern Wood-Pewee – was a prominent component of the migrant arrivals.

The number of Loggerhead Shrikes was within recent norms, but increasingly, these are found on wires and other perches near the shore rather than further inland.

The local summer resident vireos were augmented by migrants passing through, especially Red-eyed and Philadelphia Vireos. White-eyed Vireos, a species easily detected because of its characteristic call, and propensity to call frequently, was present in good numbers, without any number along the coast. Warbling Vireos migrate earlier than Philadelphia Vireos but there was one late migrant in Sabine Woods nevertheless. Neither the Yellow-green Vireo nor the Black-whiskered Vireo seen at Sabine Woods earlier in the season were still there.

Since the first arrival of West Nile virus to the area, we have looked at Corvid numbers carefully, because those species are especially susceptible to it. Blue Jays and American Crows were present in normal numbers, but Fish Crows were significantly down.

Purple Martins and swallow numbers were very much normal. Cliff Swallows have invaded the area only in the last very few years, and have been increasing steadily until this year, when the numbers seem to have levelled off or even decreased somewhat.

Both Carolina Chickadee and Tufted Titmouse numbers were low, for no reason that we can divine. But wren numbers, of all species, seem to be normal or only a little low. We find Blue-gray Gnatcatcher on about half the counts, and this year there were two.

Eastern Bluebird, thrush and related species numbers were all unremarkable, except for Swainson's Thrushes, present in Sabine Woods in very high numbers. We were glad to find that Northern Mockingbird numbers were within recent norms, because of the greatly reduced numbers

recorded on last fall's count. Brown Thrashers nest from Sabine Woods to the northern reaches of the county (and well beyond), and the results show that widespread distribution within the county, adding up to a very normal total.

At least 15 species of warbler are still migrating in some numbers in mid-May and when the weather forces migrant down on the coast, we get a good selection and often significant numbers. It is not insightful to detail each species seen this year. There have been prior years with weather induced concentrations at Sabine Woods – 1997, 99, 2000, 04, 07, 10, 12, 13, 14. Notable this year were 47 American Redstarts, 26 Magnolia Warblers, 19 Bay-breasted Warblers and 12 Blackburnian Warblers. We also added Nashville Warbler to the count list. Being a circum-Gulf migrant, we see far more Nashville Warblers in the fall.

By mid-May, only a few Nelson's and Savannah Sparrows and the resident Seaside Sparrows can be expected, and they were there, albeit in very small numbers as far as Savannah Sparrows are concerned. But an adult White-crowned Sparrow at Sabine Woods was totally unexpected, and, of course, another addition to the all-time count species list. Some participants suggested it was very lethargic and that perhaps it was sick.

Interestingly, no Scarlet Tanagers were seen, even though Summer Tanagers were present in normal numbers. Based on observations earlier in the spring, it may be that Scarlet Tanagers, for some reason, are migrating earlier than they used to. Northern Cardinal were present in normal numbers. Rose-breasted Grosbeaks were included in the migrants, while Blue Grosbeaks were both in with the other migrants, and spread over the western part of the county where they breed along with Indigo Buntings. Painted Bunting numbers were average, as were Dickcissels.

One Bobolink was less expected but there have been a few in several recent years. All the grackles were seen in normal numbers, but Red-winged Blackbirds were somewhat low. Brown-headed Cowbirds were very low, but there was one Bronzed Cowbird, a species first seen on the count in 2010, but now becoming more expected. Orchard Orioles nest in Sabine Woods and elsewhere along the immediate coast and were there in normal numbers. Four Baltimore Orioles were included in the migrants, with one more in west Jefferson County. House Sparrow numbers were a little low, although we suspect our coverage of residential neighborhoods may have been somewhat reduced this year.

Birds recorded:

WHISTLING-DUCK, Black-bellied (85); WHISTLING-DUCK, Fulvous (57); DUCK, Wood (19); MALLARD (1); DUCK, Mottled (46); TEAL, Blue-winged (88); TEAL, Green-winged (2); SCAUP, Lesser (4); MERGANSER, Red-breasted (1); DUCK, Ruddy (19); BOBWHITE, Northern (4); GREBE, Least (8); GREBE, Pied-billed (7); GREBE, Eared (1); CORMORANT, Neotropic (315); ANHINGA (8); PELICAN, Brown (85); BITTERN, Least (11); HERON, Great Blue (21); EGRET, Great (156); EGRET, Snowy (109); HERON, Little Blue (102); HERON, Tricolored (51); EGRET, Cattle (700); HERON, Green (36); NIGHT-HERON, Black-crowned (13); NIGHT-HERON, Yellow-crowned (23); IBIS, White (185); IBIS, Glossy (1); IBIS, White-faced (29); IBIS, Plegadis species (139); SPOONBILL, Roseate (21); VULTURE, Black (56); VULTURE, Turkey (96); OSPREY (6); KITE, Swallow-tailed (1); KITE, Mississippi (6); HAWK, Cooper's (1); EAGLE, Bald (1); HAWK, White-tailed (1); HAWK, Red-shouldered (23); HAWK, Broad-winged (4); HAWK, Swainson's (15); HAWK, Red-

tailed (9); RAIL, King (2); RAIL, Clapper (32); RAIL, Virginia (2); SORA (13); GALLINULE, Purple (20); GALLINULE, Common (43); COOT, American (28); STILT, Black-necked (106); AVOCET, American (10); PLOVER, Black-bellied (39); PLOVER, Wilson's (10); PLOVER, Semipalmated (15); KILLDEER (127); SANDPIPER, Spotted (15); YELLOWLEGS, Greater (7); WILLET (41); YELLOWLEGS, Lesser (24); YELLOWLEGS species (2); WHIMBREL (21); GODWIT, Hudsonian (2); TURNSTONE, Ruddy (30); SANDPIPER, Stilt (144); SANDERLING (301); DUNLIN (23); SANDPIPER, Baird's (2); SANDPIPER, Least (46); SANDPIPER, White-rumped (446); SANDPIPER, Pectoral (3); SANDPIPER, Semipalmated (75); SANDPIPER, Western (13); SANDPIPER, Peep (49); DOWITCHER, Long-billed (2); PHALAROPE, Wilson's (7); GULL, Laughing (142); GULL, Franklin's (1); GULL, Ring-billed (7); GULL, Herring (2); GULL, Glaucous (1); TERN, Least (169); TERN, Caspian (36); TERN, Black (211); TERN, Common (2); TERN, Forster's (51); TERN, Royal (378); TERN, Sandwich (18); SKIMMER, Black (293); PIGEON, Rock (115); DOVE, Eurasian Collared- (17); DOVE, Inca (2); DOVE, White-winged (112); DOVE, Mourning (234); CUCKOO, Yellow-billed (21); OWL, Barn (2); SCREECH-OWL, Eastern (2); OWL, Great Horned (1); OWL, Barred (9); NIGHTHAWK, Common (43); SWIFT, Chimney (63); HUMMINGBIRD, Ruby-throated (3); HUMMINGBIRD, Species (2); KINGFISHER, Belted (3); WOODPECKER, Red-headed (5); WOODPECKER, Red-bellied (37); WOODPECKER, Downy (15); WOODPECKER, Pileated (8); CARACARA, Crested (12); FLYCATCHER, Olive-sided (3); WOOD-PEWEE, Eastern (43); FLYCATCHER, Yellow-bellied (2); FLYCATCHER, Acadian (8); FLYCATCHER, Traill's (1); FLYCATCHER, Least (4); FLYCATCHER, Empidonax (6); FLYCATCHER, Great Crested (12); KINGBIRD, Western (3); KINGBIRD, Eastern (158); FLYCATCHER, Scissor-tailed (54); SHRIKE, Loggerhead (72); VIREO, White-eyed (37); VIREO, Yellow-throated (6); VIREO, Warbling (1); VIREO, Philadelphia (12); VIREO, Red-eyed (29); JAY, Blue (76); CROW, American (39); CROW, Fish (13); CROW, Species (20); SWALLOW, N. Rough-winged (4); MARTIN, Purple (110); SWALLOW, Tree (14); SWALLOW, Bank (1); SWALLOW, Barn (199); SWALLOW, Cliff (1102); SWALLOW, Cave (2); SWALLOW, Cave/Cliff (19); CHICKADEE, Carolina (39); TITMOUSE, Tufted (5); WREN, Marsh (26); WREN, Carolina (20); GNATCATCHER, Blue-gray (2); BLUEBIRD, Eastern (10); VEERY (1); THRUSH, Gray-cheeked (3); THRUSH, Swainson's (54); THRUSH, Wood (2); ROBIN, American (8); CATBIRD, Gray (19); THRASHER, Brown (11); MOCKINGBIRD, Northern (408); STARLING, European (292); WAXWING, Cedar (75); OVENBIRD (1); WATERTHRUSH, Northern (2); WARBLER, Golden-winged (4); WARBLER, Black-and-white (12); WARBLER, Prothonotary (9); WARBLER, Tennessee (12); WARBLER, Nashville (1); YELLOWTHROAT, Common (54); WARBLER, Hooded (1); REDSTART, American (47); PARULA, Northern (6); WARBLER, Magnolia (27); WARBLER, Bay-breasted (24); WARBLER, Blackburnian (15); WARBLER, Yellow (4); WARBLER, Chestnut-sided (12); WARBLER, Pine (10); WARBLER, Yellow-throated (1); WARBLER, Black-throated Green (6); WARBLER, Canada (1); CHAT, Yellow-breasted (4); SPARROW, Nelson's (6); SPARROW, Seaside (39); SPARROW, White-crowned (1); SPARROW, Savannah (3); TANAGER, Summer (8); CARDINAL, Northern (142); GROSBEAK, Rose-breasted (9); GROSBEAK, Blue (17); BUNTING, Indigo (43); BUNTING, Painted (12); DICKCISSEL (180); BOBOLINK (1); BLACKBIRD, Red-winged (375); MEADOWLARK, Eastern (103); GRACKLE, Common (148); GRACKLE, Boat-tailed (113); GRACKLE, Great-tailed (267); GRACKLE, Gt./Boat-tailed (8); COWBIRD, Bronzed (1); COWBIRD, Brown-headed (82); ORIOLE, Orchard (47); ORIOLE, Baltimore (5); FINCH, House (17); SPARROW, House (100); TOTAL INDIVIDUALS (11288); TOTAL SPECIES (192)

Number of Observers (16); Number of Parties (8-10); Number of Party-Hours - Foot (19.9); Number of Party-Hours - Car (66.9); Number of Party-Hours - Stationary (4.3); Total Party-hours (91.1); (0); Number of Party-Miles - Foot (11.2); Number of Party-Miles - Car (403.2); Total Party-Miles (414.4); Participants: Jessica Barry, Sherry Gibson, John Haynes, Sheila Hebert, Thomas Hellweg, Harrison Jordan, Gary and Denise Kelley, Steve Mayes, Sherrie Roden, Christine Sliva, Harlan Stewart, Jana and John Whittle, Carolyn and William Worsham.