

Bees of the Big Thicket National Preserve Phase II: 2022 Final Report

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Summary

This report summarizes recent research conducted on bees of the Big Thicket National Preserve (BITH), Texas from 2017–2021 made possible by funding from by the Big Thicket Association, Texas Commission on Environmental Quality, and Stephen F. Austin State University (SFA). The project has documented 127 species of bees occurring among several habitats including mesic pine-hardwood forest, wet savanna, longleaf pine savanna, and sandylands. Comparisons of samples made before and after a flooding event caused by Hurricane Harvey (“Harvey” hereafter) indicate that most species of bees found before the flood were present in the second year after the flood.

Introduction

The first phase of this project began in 2017 with the objective of comparing the diversity of bees among various habitats of the BITH. Goals of this project changed due to a major interruption caused by Harvey in summer 2017. Much data was collected that year and numerous species of bees were recognized, many for the first time, from the preserve. Late summer and fall collecting continued after the storm in 2017, but not to the degree initially planned due to the storm’s impact on BITH infrastructure. Due to this interruption, phase I of this project ended early and plans were made for a new project.

Phase II of this project began in 2019 with goals of adding to the list of species known for BITH and searching for evidence of an impact of Harvey on bees. Since one of the 2017 field sites (Sand Loop Trail in the southern portion of the Turkey Creek Unit) flooded extensively during the storm, potentially killing ground-nesting bees, a rare opportunity presented itself to document flooding effects on insect populations. The hypothesis that ground-nesting bees suffered higher casualties than above-ground nesting bees was tested by comparing samples before and after the storm by SFA master’s student Archie Sauls. His analysis culminated in a thesis completed May 2021, which is currently under embargo until May 2022 while he prepares his work for publication. Our purpose here is to provide a final report of our results to date and provide some key findings regarding our investigation into Harvey’s impact on bees in the BITH.

Methods

In 2017, three localities were selected for sampling with a standard array of insect traps: (1) a mesic, mixed pine-hardwood forest near Pitcher Plant Trail at the north end of Turkey Creek Unit (30.58636° -94.33606°; referred to herein as “PPT”); (2) a longleaf pine restoration area with a wet savanna understory near preserve headquarters on FM 420 (30.4596° -94.38316°; referred to herein as “HQ”); and (3) a longleaf pine, xeric savanna/sandyland near Sand Loop, Kirby Nature Trail (30.47388° -94.33773°; referred to herein as “SL-1”). In 2019 a fourth site was added that had received minor collecting in 2017: (4) a longleaf pine, xeric sandyland near FM 1493 (30.47269° -94.33649°; referred to herein as “SL-2”). Minor bouts of exploratory collecting occurred at various other sites in the preserve, including a few samples taken in 2018. In 2017 and 2019 sampling began in late February and was conducted through early November (2017) or mid-October (2019), with the exception of SL-1 in 2017. There collecting ceased at the end of August due the closure of a bridge over Turkey Creek due to damage resulting from Harvey’s impacts.

At each of the main sites, one malaise trap (Fig. 1) and two blue-vane traps (Fig. 2) were in continuous operation during the sampling period and were serviced roughly every other weekend. In addition, pan traps (Figs 3–4) were utilized (small colored cups filled with soapy water). Pan traps were set along two, ca. 50–150 m transects. Each transect contained 9 ground-level pans, each separated by ca. 5–10 m. At sites HQ and SL-1, an additional 9 pan traps were placed atop 0.3 m pvc poles. Pans were left in place for about 24 h before samples were gathered. Pan traps were usually deployed every other weekend during the sampling period; in some cases, pan traps were not set or their placement was delayed due to poor weather conditions. An aerial net and direct searching were often employed, but this method was not conducted in a standardized manner. In 2017, yellow vane traps and pan traps at additional heights were used. Poor results led to their disuse in 2019.

Fieldwork in 2019 was carried out by principal investigator Daniel Bennett and SFA graduate student Archie Sauls. Bennett supervised initial processing of samples. Sauls and SFA undergraduate student Amethyst Haynes sorted bees from bulk samples, prepared label files and assisted with data entry. Principal investigator John Pascarella identified specimens and supervised pinning and labeling activities by Sam Houston State University (SH) student Melanie Quinchiguango. Bennett and Sauls analyzed the data as one of the main objectives of Sauls’ thesis project. Select beetle families, orthopterans, neuropterans, manitds, and select families of wasps that accumulated as trap bycatch were pinned, labeled, and analyzed by SFA undergraduate student Xander Haynes as part of a supplemental undergraduate research project. An additional supplemental project involved work on ants that accumulated as bycatch by Sauls prior to his graduate work on bees.

Results and Discussion

All samples taken during both phases of this project have been processed for bees and specimen data for all bees has been provided to the National Park Service for data archival. This material represents 127 species based on 9,190 specimen records (Tables 1–2). Of these records, nearly all specimens were labeled, identified to species, and archived in museum cabinets and drawers. Some were discarded (mainly honey bees) after the data were recorded and not archived. Many males of the genus *Lasioglossum* and a few specimens of other genera could not be identified to species.

The SL-1 site produced 84 species (62 in 2017, 16 in 2018, 61 in 2019), PPT produced 75 species (54 in 2017, 9 in 2018, 59 in 2019), SL-2 produced 72 species (26 in 2017, 19 in 2018, 64 in 2019), and HQ produced 54 species (43 in 2017, 7 in 2018, 41 in 2019; Tables 1–2). Total values per site reflect different levels of effort, and thus the data needs to be adjusted before comparisons can be made regarding habitat differences. Nonetheless, after accounting for the limited collecting at SL-2 in 2017, it is worth noting that xeric habitats yielded more species and far more specimens of bees than mesic or moist habitats, a pattern expected prior to the study. It is also notable, however, that the mesic forest site (PPT) was found to be nearly as rich in species as SL-1 on the basis of far fewer specimens, suggesting the site likely supports fewer individuals of bees though perhaps at least as many species than the xeric sites.

Once Mr. Sauls' thesis is released, detailed results comparing samples taken before and after Harvey will be available. Highlights from that work include the following: (1) overall species richness values for adjusted data are nearly identical before and after the storm; (2) median species richness values of the collection intervals were narrowly but statistically higher prior to the storm; (3) abundance differences across years for all bees pooled were not statistically significant; (4) Shannon's diversity index values were significantly higher before the storm; and (5) Shannon's diversity index differences were more pronounced for ground nesting bees than above ground nesting bees. In short, no evidence was found for a widespread, large decline of a multitude of bee species due to the storm. Some evidence points to a slight, yet statistically significant decline among ground nesting bees but not for above ground nesting bees. On a per species basis, different patterns were evident, including both large declines and increases after the storm. Overall, most species of bees showed resilience to this particular flooding event either through continuity of populations despite the flooding event or through recolonization from other areas in the year following the storm.

A substantial amount of bycatch representing other insect groups remains unprocessed and is available for additional research. As time, funds, and interest from students and collaborators allow, further groups of insects from this project will be processed in the coming years, shedding additional light on the biodiversity of the Big Thicket National Preserve.

The following presentations were made based on this work:

Bennett, D.J., & X. Haynes. 2021. Impacts of fire and flooding events on insects in the Big Thicket National Preserve, Texas. Entomological Society of America Annual Meeting, Denver, Colorado. Submitted poster contribution.

Haynes, X., A. Haynes, & D.J. Bennett. 2020. Comparisons of scarab and cerambycid beetle diversity before and after a rare, hurricane-induced flooding event in southeastern Texas. Texas Academy of Sciences Annual Meeting, Nacogdoches, Texas. Submitted poster contribution.

Sauls, A.R., J. Pascarella, & D.J. Bennett. 2020. The bees of a sandhill community before and after a rare flooding event in the Big Thicket National Preserve, Texas. Texas Academy of Sciences Annual Meeting, Nacogdoches, Texas. Submitted poster contribution.

Expenditures

Of \$12,386.85 budgeted for phase II of this project (tracked in SFA Banner fund 206661-26120-150), \$9,812.34 was spent. Of the 30% (\$3,716.05) withheld by the sponsor at the outset of the project, \$1,141.54 is required to settle the account. A grant from SFA Office of Research and Graduate Studies in 2019 provided an additional \$1488 for the procurement of blue vane traps.

Expenditures by funding category are detailed in tables 3–7 herein, exported from SFA’s Banner accounting system. Funding categories substantially underbudget are travel and subcontracted student hourly labor. Specimen processing was accomplished with less than anticipated effort due to the efficient and competent work of SH undergraduate student Ms. Quinchiguango. This is evidenced by tables 4 & 6 (“Other Professional Services”) and time sheet Table 6. Lead researcher earnings and student hourly work are documented in tables 4, 5, & 7.

Travel was underbudget due in part to a new vehicle acquired by the SFA Department of Biology. The original proposal anticipated a greater reliance on rented vehicles and a higher cost. The grant was only charged for fuel use rather than mileage, which lowered expenses. Furthermore, roughly \$429.59 of fuel was not billed to the grant; these charges were encumbered by the department. Travel was accomplished with a combination vehicle rentals (\$627.84, vehicle [\$492.48] + fuel charges [\$135.36; note \$10.00 unexplained discrepancy between receipts of \$145.36 and Banner value of \$135.36]), personal vehicle mileage (\$54.81, one trip to SH to transfer specimens), and the departmental vehicle (\$288.84 fuel). Included herein are fuel and vehicle rental receipts billed to the grant.

Acknowledgements

We appreciate the guidance of Mary Catherine Johnson over the course of this project and its review by members of the Big Thicket Association Science Committee. Advice and facilitation

of fieldwork provided by BITH personnel was invaluable. This project was performed with penalty monies from a Texas Commission on Environmental Quality enforcement action and support from the Stephen F. Austin State University Office of Research and Graduate Studies.

Tables and Figures

Table 1. Number of specimens and species of bees collected sites in the Big Thicket National Preserve from surveys made 2017–2019 (2017/2018/2019).

	Pitcher Plant Trail (PPT)	Near headquarters (HQ)	Sand Loop (SL-1)	FM 1493 (SL-2)	Other sites	Total
No. specimens by year	522/52/790	884/25/666	1949/98/1771	254/116/1743	277/4/39	3886/295/5009
No. species by year	54/9/59	43/7/41	62/16/61	26/19/64	27/2/16	89/28/106
No. species all years	75	54	84	72	40	127

Table 2. Species and numbers of specimens of bees collected at sites in the Big Thicket National Preserve from surveys made 2017–2019 (2017/2018/2019). Undetermined morphospecies are indicated by “sp. #” and contribute to the total number of species recognized. “Sp.” and “spp.” indicate unidentified specimens that do not contribute to the total number of species recognized.

Family	Genus	Species	Pitcher Plant Trail (PPT)	Near Head-quarters (HQ)	Sand Loop (SL-1)	2017: FM 1493 (SL-2)	2017: Other sites	2017 Total	2018 Total	2019 Total
Andrenidae	Andrena	cressonii	1/0/1				0/0/1	1		2
Andrenidae	Andrena	dolomellea				0/0/1		0		1
Andrenidae	Andrena	forbesii	0/0/2					0		2
Andrenidae	Andrena	fulvipennis		1/0/0		4/0/2		5		2
Andrenidae	Andrena	gardineri			1/0/0			1		0
Andrenidae	Andrena	hippotes					0/0/3	0		3
Andrenidae	Andrena	ilicis					0/0/10	0		10
Andrenidae	Andrena	imitatrix	0/0/1		1/0/0			1		1
Andrenidae	Andrena	miserabilis			0/0/2	0/0/1		0		3
Andrenidae	Andrena	sp. 1 (rubi ?)					0/0/1	0		1
Andrenidae	Andrena	verecunda		0/0/1				0		1
Andrenidae	Andrena	violae	0/0/2		0/0/1			0		3
Andrenidae	Calliopsis	andreniformis			0/0/1			0		1
Andrenidae	Perdita	bishoppi	1/0/0	0/0/1	3/0/53	5/0/534		9		588
Andrenidae	Perdita	cambarella			0/0/10	0/0/1		0		11
Andrenidae	Perdita	halictoides				0/0/1		0		1
Andrenidae	Perdita	ignota	1/0/0	4/0/1	3/0/0	8/0/8		16		9
Andrenidae	Perdita	obscurata	0/0/1		74/0/244	0/0/44		74		289
Apidae	Anthophora	abrupta	1/0/1		1/0/0	0/0/5		2		6
Apidae	Apis	mellifera	83/0/48	474/0/357	39/0/25	0/0/66	85/0/0	681		496
Apidae	Bombus	griseocollis	1/0/2		1/0/0			2		2
Apidae	Bombus	impatiens	3/0/2	3/0/1	3/1/2	0/0/2	10/0/0	19	1	8
Apidae	Bombus	pensylvanicus	11/0/22	24/0/17	14/0/25	6/0/16	1/0/0	56		80
Apidae	Bombus	sp.	0/0/1					0		1
Apidae	Ceratina	calcarata	0/0/1			21/0/11		21		12
Apidae	Ceratina	cockerelli	1/0/5	4/0/7	8/3/2	2/3/3	1/0/1	16	6	18
Apidae	Ceratina	shinnersi				0/0/1		0		1
Apidae	Ceratina	sp.			1/0/1	0/1/3		1	1	4
Apidae	Ceratina	strenua	0/2/6		0/0/1	1/2/15		1	4	22
Apidae	Epeolus	ilicis			0/0/2			0		2
Apidae	Epeolus	lectoides			2/0/11	0/0/4		2		15
Apidae	Habropoda	laboriosa	40/0/45	25/0/18	30/0/49	0/0/32		95		144
Apidae	Holcopasites	illinoiensis			1/0/0			1		0
Apidae	Melissodes	agilis		1/0/0				1		0
Apidae	Melissodes	bimaculata	5/0/10		1/0/10	4/0/5		10		25
Apidae	Melissodes	communis	37/0/22	20/1/29	454/44/634	75/3/385	2/0/0	588	48	1070
Apidae	Melissodes	comptoides ?			0/0/1			0		1
Apidae	Melissodes	dentiventris	2/0/0	5/0/0				7		0
Apidae	Melissodes	druriellus				1/0/1		0		1
Apidae	Melissodes	sp. 1	1/0/0					1		0
Apidae	Melissodes	sp. 2			0/0/1			0		1
Apidae	Melissodes	tepaneca	1/0/0		3/0/0			4		0
Apidae	Melitoma	taurea	4/0/3	0/0/1	13/0/0	2/0/5		19		9
Apidae	Nomada	armatella ?					0/0/3	0		3
Apidae	Nomada	rubicunda			0/0/1		0/0/2	0		3
Apidae	Nomada	vincta				1/0/1		0		1
Apidae	Peponapis	pruinosa		0/0/1				0		1
Apidae	Ptilothrix	bombiformis	76/0/30	50/0/26	27/0/17	1/0/1	5/0/0	159		74
Apidae	Svastra	atripes	3/0/2	6/0/11	5/1/10	2/0/1		16	1	24
Apidae	Svastra	compta		1/0/0	1/0/0			2		0
Apidae	Triepeolus	lunatus			0/0/14	1/0/1		0		15
Apidae	Triepeolus	simplex	1/0/0		1/0/1			2		1
Apidae	Xylocopa	micans		1/0/2			1/0/0	2		2

Apidae	Xylocopa	virginica	9/0/13	9/0/8	2/0/13	0/0/4	2/0/0	22		38
Colletidae	Colletes	inaequalis			0/0/1	0/0/2	0/0/2	0		5
Colletidae	Colletes	nudus			0/0/1			0		1
Colletidae	Colletes	productus			0/0/1			0		1
Colletidae	Colletes	thoracicus	1/0/0		1/0/1	0/0/1		2		2
Colletidae	Hylaeus	affinis	1/0/5	1/0/0		0/0/1		2		6
Colletidae	Hylaeus	confluens		3/0/0				3		0
Colletidae	Hylaeus	floridanus	2/0/1		0/2/1	1/0/1		2	2	3
Colletidae	Hylaeus	georgicus				1/0/1		0		1
Halictidae	Agapostemon	splendens	3/0/1		8/7/2	1/0/2	5/0/0	17	7	5
Halictidae	Agapostemon	texanus			1/0/0			1		0
Halictidae	Agapostemon	texanus ?	1/0/0	5/0/0	1/0/0		1/0/0	8		0
Halictidae	Augochlora	pura	0/0/1	1/0/0	0/0/1	0/1/0		1	1	2
Halictidae	Augochlorella	karankawa			208/5/12	1/0/0		209	5	12
Halictidae	Augochloropsis	metallica	2/0/19	7/0/6	5/0/3	0/0/8	5/0/0	19		36
Halictidae	Augochloropsis	sumptuosa	0/0/1		0/0/1	0/0/1		0		3
Halictidae	Halictus	ligatus	1/0/1	1/0/2		2/0/0	1/0/0	5		3
Halictidae	Lasioglossum	apopkense	29/4/188	4/0/6	170/5/209	4/18/117	21/0/1	228	27	521
Halictidae	Lasioglossum	batya	0/0/3	0/0/3	14/0/3	9/3/3		23	3	12
Halictidae	Lasioglossum	birkmanni	1/1/2		0/0/3	0/4/2	1/0/0	2	5	7
Halictidae	Lasioglossum	bruneri	24/28/96	25/1/5	56/11/13	5/7/23	17/0/0	127	47	137
Halictidae	Lasioglossum	callidum	8/0/2	8/0/3		0/0/1		16		6
Halictidae	Lasioglossum	cinctipes	1/0/2		8/0/6			9		8
Halictidae	Lasioglossum	coreopsis	46/5/55	37/4/41	10/1/12	0/0/9	4/0/1	97	10	118
Halictidae	Lasioglossum	creberrimum	17/0/18	19/0/18	4/0/8	0/0/5		40		49
Halictidae	Lasioglossum	disparile	0/0/1	7/0/0	2/0/0			9		1
Halictidae	Lasioglossum	fedorense			18/0/16	9/0/94		27		110
Halictidae	Lasioglossum	floridanum	10/0/3	1/0/4	182/1/58	15/4/56	2/0/0	210	5	121
Halictidae	Lasioglossum	illinoense	4/0/2	3/0/1	6/0/4	2/0/1		15		8
Halictidae	Lasioglossum	imitatum		0/0/1			85/0/0	85		1
Halictidae	Lasioglossum	longifrons		0/2/8				0	2	8
Halictidae	Lasioglossum	lustrans			1/0/0			1		0
Halictidae	Lasioglossum	pectorale	3/0/0					3		0
Halictidae	Lasioglossum	pruinatum			4/0/0			4		0
Halictidae	Lasioglossum	reticulatum	1/0/2					1		2
Halictidae	Lasioglossum	semicaeruleum	0/0/1					0		1
Halictidae	Lasioglossum	spp.	0/0/45	6/0/24	50/0/11	0/0/21	2/0/0	58		101
Halictidae	Lasioglossum	tarponense	0/1/0		4/0/2	7/8/1		11	9	3
Halictidae	Lasioglossum	tegulare	17/5/19	15/3/9	145/4/61	19/5/123	2/0/0	198	17	212
Halictidae	Lasioglossum	trigeminum	1/0/7	4/1/2		0/1/1	1/0/0	6	2	10
Halictidae	Lasioglossum	vierecki	5/5/0	1/0/0	202/5/58	46/44/52	0/0/2	254	54	112
Halictidae	Lasioglossum	weemsi	40/2/30	63/13/4	1/0/0	3/0/1	10/0/0	117	15	35
Halictidae	Nomia	nortoni		1/0/0		0/0/1		1		1
Halictidae	Sphecodes	atlantis	2/0/2		0/0/1	0/0/5		2		8
Halictidae	Sphecodes	brachycephalus	0/0/1		47/0/70	0/0/3		47		74
Halictidae	Sphecodes	sp. 1				0/0/1		0		1
Megachilidae	Anthidiellum	notatum	2/0/1	0/0/1	3/2/2	0/3/1		5	5	5
Megachilidae	Coelioxys	immaculatus			2/0/0			2		0
Megachilidae	Coelioxys	mexicanus	1/0/0					1		0
Megachilidae	Coelioxys	octodentatus				0/0/1		0		1
Megachilidae	Coelioxys	sayi			1/0/0			1		0
Megachilidae	Dianthidium	curvatum		2/0/0	0/0/2	0/1/3	1/0/0	3	1	5
Megachilidae	Heriades	carinata		1/0/0				1		0
Megachilidae	Hoplitis	pilosifrons	0/0/1					0		1
Megachilidae	Hoplitis	simplex					0/0/4	0		4
Megachilidae	Hoplitis	truncata	1/0/1	0/0/1	2/0/0			3		2
Megachilidae	Megachile	albitarsis	0/0/1	1/0/1		0/2/0	2/2/0	3	4	2
Megachilidae	Megachile	deflexa			1/0/0			1		0
Megachilidae	Megachile	frugalis	0/0/2		1/0/4			1		6
Megachilidae	Megachile	georgica	7/0/19	27/0/32	29/4/39	0/3/24	2/2/0	65	9	114
Megachilidae	Megachile	lippiae			1/1/0			1	1	0
Megachilidae	Megachile	melanophaea			1/0/0			1		0
Megachilidae	Megachile	mendica	2/0/4	8/0/2	10/0/6	0/0/4	5/0/0	25		16
Megachilidae	Megachile	mucida	0/0/1		2/0/1	0/0/3		2		5
Megachilidae	Megachile	petulans			0/0/1	0/0/1		0		2
Megachilidae	Megachile	policaris	1/0/0					1		0
Megachilidae	Megachile	pseudobrevis	1/0/0	0/0/2	3/0/2	0/1/6		4	1	10
Megachilidae	Megachile	rugifrons	0/0/1		0/0/7	0/0/1		0		9

Megachilidae	Megachile	texana	1/0/0	1/0/1	50/0/6	1/1/5		53	1	12
Megachilidae	Megachile	xylocopoides	1/0/0		2/0/0	0/1/0	1/0/0	4	1	0
Megachilidae	Osmia	atriventris	0/0/6		1/0/0	0/0/1	0/0/2	1		10
Megachilidae	Osmia	chalybea	1/0/3	1/0/0	1/0/0		0/0/1	3		4
Megachilidae	Osmia	georgica		0/0/1			0/0/1	0		2
Megachilidae	Osmia	juxta	0/0/1					0		1
Megachilidae	Osmia	sandhouseae	2/0/17	1/0/3	2/0/0	1/0/0	0/0/4	6		34
Megachilidae	Osmia	sp.	0/0/1					0		1
Megachilidae	Osmia	texana	0/0/2	0/0/1	0/0/1			0		4
Megachilidae	Stelis	lateralis				0/0/1		0		1
Megachilidae	Stelis	louisae		2/0/3				2		3

Table 3. Funding amounts budgeted vs. amounts expended.

TCEQ Funding Category	Environmental Project Category	Quantity Budgeted	Total Per Item budgeted	Quantity Expended	Amount Expended
Funding Category – 1	Lead researcher	129 @ \$46.05/hour estimated	\$5940.45	173.32	\$5928.75
Funding Category – 2	Undergraduate student contractors (SFASU)	150 hours @ 10.20/hour estimated	\$1530 @ \$8.20 hour + fringe	193.13	\$1694.15
Funding Category – 2	Undergraduate student contractors (SHSU subcontract)	202 hours @10.20/hour estimated	\$2060.4	107.25	\$1190.54
Funding Category - 3	Transportation	34 days @ \$84/day estimated	\$2856	n/a	\$971.49
				Total direct cost budgeted: \$12,386.85 Total direct cost spent: \$9,812.34	

Table 4. Summary of expenses ex. SFA Banner accounting system. SFA undergraduate hourly was placed under “Graduate Teaching Assts.”

Account	Account Title	Account Type2 Title	Budget	Expenditures
610B	Salaries and Wages Budget Pool	Salaries and Wages	6600.66	
670080	Faculty Academic Salaries	Salaries and Wages		5100
670090	Graduate Teaching Assts	Salaries and Wages		1593.33
67B1	Employee Benefits Budget Pool	Benefits	869.79	
670430	FICA and Medicare	Benefits		486.52
670620	Workers Comp Claims	Benefits		66.93
670860	ORP Matching	Benefits		336.6
679840	Unemployment Compensation	Benefits		66.93
				956.98
71B1	Travel Budget Pool	Travel	1382.65	
771010	In State Public Transportation	Travel		627.84
771020	In State Mileage	Travel		54.81
773040	Fuels and Lubricants	Operating Expenditures		288.84
				971.49
72B0	Operations & Maint Budget Pool (Budgeted as "Travel" in proposal)	Operating Expenditures	1473.35	0
772530	Other Professional Services	Operating Expenditures	2060.4	1190.54
			12386.85	9812.34

Table 5. Salary detail SFA personnel ex. SFA Banner accounting system.

Fund	Org.	Account	Title	Fiscal Year	Fiscal Period	Grant Year	Grant Period	ID	Last Name	Debit/Credit	Transaction Date	Amount	Position	Hours	Earn Code	Finance Document	Rule Class
206661	26120	670080	Faculty Academic Salaries	2019	10	2019	5	20069094	Bennett	Debit	30-Jun-19	2550	P99968-00	86.66	SFR	F0045313	HGNL
206661	26120	670080	Faculty Academic Salaries	2019	11	2019	6	20069094	Bennett	Debit	31-Jul-19	2550	P99968-00	86.66	SFR	F0045588	HGNL
												5100					
206661	26120	670430	FICA and Medicare	2019	11	2019	6	20069094	Bennett	Debit	31-Jul-19	36.97	P99968-00		Benefit	F0045588	HGRB
206661	26120	670430	FICA and Medicare	2019	11	2019	6	20069094	Bennett	Debit	31-Jul-19	158.1	P99968-00		Benefit	F0045588	HGRB
206661	26120	670430	FICA and Medicare	2019	10	2019	5	20069094	Bennett	Debit	30-Jun-19	158.1	P99968-00		Benefit	F0045313	HGRB
206661	26120	670430	FICA and Medicare	2019	10	2019	5	20069094	Bennett	Debit	30-Jun-19	36.98	P99968-00		Benefit	F0045313	HGRB
206661	26120	670860	ORP Matching	2019	10	2019	5	20069094	Bennett	Debit	30-Jun-19	168.3	P99968-00		Benefit	F0045313	HGRB
206661	26120	670860	ORP Matching	2019	11	2019	6	20069094	Bennett	Debit	31-Jul-19	168.3	P99968-00		Benefit	F0045588	HGRB
											WC/UC	102					
											workers comp/unemployment	828.75					
206661	26120	670090	Graduate Teaching Assts	2019	10	2019	5	20083343	Haynes	Debit	15-Jun-19	142.89	SA9617-00	17.32	STA	F0045311	HGNL
206661	26120	670090	Graduate Teaching Assts	2019	10	2019	5	20083343	Haynes	Debit	30-Jun-19	215.57	SA9617-00	26.13	STA	F0045382	HGNL
206661	26120	670090	Graduate Teaching Assts	2019	11	2019	6	20083343	Haynes	Debit	15-Jul-19	210.13	SA9617-00	25.47	STA	F0045586	HGNL
206661	26120	670090	Graduate Teaching Assts	2019	11	2019	6	20083343	Haynes	Debit	31-Jul-19	221.76	SA9617-00	26.88	STA	F0045652	HGNL
206661	26120	670090	Graduate Teaching Assts	2019	12	2019	7	20083343	Haynes	Debit	15-Aug-19	253.69	SA9617-00	30.75	STA	F0045955	HGNL
206661	26120	670090	Graduate Teaching Assts	2019	12	2019	7	20083343	Haynes	Debit	31-Aug-19	215.57	SA9617-00	26.13	STA	F0046053	HGNL
206661	26120	670090	Graduate Teaching Assts	2020	1	2019	8	20083343	Haynes	Debit	15-Sep-19	168.47	SA9617-00	20.42	STA	F0046299	HGNL
206661	26120	670090	Graduate Teaching Assts	2020	1	2019	8	20083343	Haynes	Debit	30-Sep-19	69.3	SA9617-00	8.4	STA	F0046344	HGNL
206661	26120	670090	Graduate Teaching Assts	2020	4	2019	11	20083343	Haynes	Debit	2-Dec-19	95.95	SA9617-00	11.63	STA	F0046728	HGNL
												1593.33					
206661	26120	670430	FICA and Medicare	2019	10	2019	5	20083343	Haynes	Debit	15-Jun-19	8.86	SA9617-00		Benefit	F0045311	HGRB
206661	26120	670430	FICA and Medicare	2019	10	2019	5	20083343	Haynes	Debit	15-Jun-19	2.07	SA9617-00		Benefit	F0045311	HGRB
206661	26120	670430	FICA and Medicare	2019	10	2019	5	20083343	Haynes	Debit	30-Jun-19	13.36	SA9617-00		Benefit	F0045382	HGRB
206661	26120	670430	FICA and Medicare	2019	10	2019	5	20083343	Haynes	Debit	30-Jun-19	3.13	SA9617-00		Benefit	F0045382	HGRB
206661	26120	670430	FICA and Medicare	2019	11	2019	6	20083343	Haynes	Debit	15-Jul-19	13.03	SA9617-00		Benefit	F0045586	HGRB
206661	26120	670430	FICA and Medicare	2019	11	2019	6	20083343	Haynes	Debit	15-Jul-19	3.05	SA9617-00		Benefit	F0045586	HGRB
206661	26120	670430	FICA and Medicare	2019	11	2019	6	20083343	Haynes	Debit	31-Jul-19	3.22	SA9617-00		Benefit	F0045652	HGRB
206661	26120	670430	FICA and Medicare	2019	11	2019	6	20083343	Haynes	Debit	31-Jul-19	13.75	SA9617-00		Benefit	F0045652	HGRB
206661	26120	670430	FICA and Medicare	2019	12	2019	7	20083343	Haynes	Debit	15-Aug-19	3.68	SA9617-00		Benefit	F0045955	HGRB
206661	26120	670430	FICA and Medicare	2019	12	2019	7	20083343	Haynes	Debit	15-Aug-19	15.72	SA9617-00		Benefit	F0045955	HGRB
206661	26120	670430	FICA and Medicare	2019	12	2019	7	20083343	Haynes	Debit	31-Aug-19	13.37	SA9617-00		Benefit	F0046053	HGRB
206661	26120	670430	FICA and Medicare	2019	12	2019	7	20083343	Haynes	Debit	31-Aug-19	3.13	SA9617-00		Benefit	F0046053	HGRB
											WC/UC	31.87					
												100.82		193.13			

Table 6. Sam Houston State University student hourly effort summary: Melanie Quinchiguango. All hours refer to work pinning and labeling specimens.

Payroll History Report														
Name	PAYROLL NUMBER	Position - Title	JOB SUFFIX	EARNINGS	Fund	Organization	Account	Program	Dates	Hours	Earning Amount	Document	Fiscal Year	Wages/Other
000640253 - Quinchiguango, Melanie S.	HR - 3	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	1/1/20-1/15/20	4.25	43.35	P007928	2020	Wages
		9N9293 - Stdn Lab Assnt-Research	6	ADJ	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	2/1/20-2/15/20	1	43.35	P0080513	2020	Wages
	5	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	2/1/20-2/15/20	5	51.00	P0080513	2020	Wages
	HR - 12	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	5/16/19-5/31/19	10.5	102.00	P0074831	2019	Wages
	HR - 13	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	704300 - FICA State Match	20 - Research	5/16/19-5/31/19	10.5	8.19	P0074831	2019	Fringe Benefits
	HR - 13	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	6/1/19-6/15/19	12.5	115.29	P0075084	2019	Wages
	HR - 13	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	704300 - FICA State Match	20 - Research	6/1/19-6/15/19	12.5	9.76	P0075084	2019	Fringe Benefits
	HR - 14	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	6/15/19-6/30/19	5	137.26	P0075330	2019	Wages
	HR - 14	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	704300 - FICA State Match	20 - Research	6/15/19-6/30/19	5	3.90	P0075330	2019	Fringe Benefits
	HR - 15	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	7/1/19-7/15/19	24.25	54.90	P0075587	2019	Wages
	HR - 15	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	704300 - FICA State Match	20 - Research	7/1/19-7/15/19	24.25	247.35	P0075587	2019	Wages
	HR - 16	9N9444 - Stdn Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Math Taylor Martin	701400 - Student Employees	20 - Research	7/1/19-7/15/19	26.5	18.92	P0075587	2019	Fringe Benefits
	HR - 16	9N9444 - Stdn Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Math Taylor Martin	704300 - FICA State Match	20 - Research	7/1/19-7/15/19	26.5	265.00	P0075587	2019	Wages
	HR - 17	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	7/1/21-7/15/21	50.75	551.54	P0079226	2021	Fringe Benefits
	HR - 17	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	704300 - FICA State Match	20 - Research	7/1/21-7/15/21	50.75	20.27	P0079226	2021	Fringe Benefits
	HR - 18	9N9444 - Stdn Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Math Taylor Martin	701400 - Student Employees	20 - Research	7/16/21-7/31/21	59.5	595.00	P0097329	2021	Wages
	HR - 18	9N9444 - Stdn Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Math Taylor Martin	704300 - FICA State Match	20 - Research	7/16/21-7/31/21	59.5	45.52	P0097329	2021	Fringe Benefits
	HR - 19	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	8/1/19-8/15/19	19.25	640.52	P0076509	2019	Wages
	HR - 19	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	704300 - FICA State Match	20 - Research	8/1/19-8/15/19	19.25	196.35	P0076509	2019	Wages
	HR - 20	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	8/16/19-8/31/19	17.5	211.37	P0076509	2019	Fringe Benefits
	HR - 20	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	704300 - FICA State Match	20 - Research	8/16/19-8/31/19	17.5	17.85	P0076509	2019	Wages
	HR - 21	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	9/16/19-9/30/19	2.75	17.85	P0077363	2020	Wages
	HR - 21	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	704300 - FICA State Match	20 - Research	9/16/19-9/30/19	2.75	28.05	P0077363	2020	Wages
	HR - 22	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	10/1/19-10/15/19	6.25	63.75	P0077658	2020	Wages
	HR - 22	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	704300 - FICA State Match	20 - Research	10/1/19-10/15/19	6.25	63.75	P0077658	2020	Wages
	HR - 23	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	701400 - Student Employees	20 - Research	11/1/19-11/15/19	4.75	102.00	P0078026	2020	Wages
	HR - 23	9N9293 - Stdn Lab Assnt-Research	6	RGH	278860 - Bees of the Big Thicket	202772 - PI Bio John Pasarella	704300 - FICA State Match	20 - Research	11/1/19-11/15/19	4.75	48.45	P0078026	2020	Wages
Quinchiguango, Melanie S.														
											183.25	2,116.33		
Report Total 2116.33														
Some of these hours are for another project.														
Note that cell KS:15 do not equate. This is probably just a manual adjustment to reflect the actual hours worked.														
											Big Thicket Bee Project hours =	107.25		
											Big Thicket Bee Project earnings & fringe =	1,190.54		

Table 7. Stephen F. Austin State University student hourly time sheet: Amethyst Haynes. All hours recorded below as “Student Asst. – Biology” correspond to work sorting samples. Other hours recorded below were not charged to this funding source. Hours September-December are not shown (included in Table 5).

20083343 - Amethyst Haynes										
Hours - 06/01/2019 to 08/16/2019										
O	Note	Edit	Brk	Time in	Time out	Task Code	Hours	Rate	Shift total	Week to
X				6/4/2019 09:27 AM	6/4/2019 01:17 PM	80961700 - 00-Student Asst-Biology	3:50	8.25	3:50	
X				6/4/2019 02:00 PM	6/4/2019 04:30 PM	80961700 - 00-Student Asst-Biology	2:30	8.25	2:30	
X				6/5/2019 09:03 AM	6/5/2019 01:54 PM	80961700 - 00-Student Asst-Biology	4:51	8.25	4:51	11
X				6/8/2019 02:18 PM	6/8/2019 05:37 PM	80957900 - 00-Student Asst-Physics Astron	3:19	9.00	3:19	
X				6/8/2019 06:22 PM	6/8/2019 07:07 PM	80957900 - 00-Student Asst-Physics Astron	0:45	9.00	0:45	
X				6/13/2019 09:14 AM	6/13/2019 12:53 PM	80961700 - 00-Student Asst-Biology	3:39	8.25	3:39	
X				6/13/2019 02:24 PM	6/13/2019 04:53 PM	80961700 - 00-Student Asst-Biology	2:29	8.25	2:29	10
X				6/17/2019 09:10 AM	6/17/2019 12:37 PM	80961700 - 00-Student Asst-Biology	3:27	8.25	3:27	
X				6/18/2019 08:58 AM	6/18/2019 12:26 PM	80961700 - 00-Student Asst-Biology	3:28	8.25	3:28	
X				6/19/2019 09:01 AM	6/19/2019 01:33 PM	80961700 - 00-Student Asst-Biology	4:32	8.25	4:32	11
X		X		6/22/2019 01:00 PM	6/22/2019 08:00 PM	80957900 - 00-Student Asst-Physics Astron	7:00	9.00	7:00	
X				6/24/2019 09:37 AM	6/24/2019 01:24 PM	80961700 - 00-Student Asst-Biology	3:47	8.25	3:47	
X				6/25/2019 09:10 AM	6/25/2019 01:24 PM	80961700 - 00-Student Asst-Biology	4:14	8.25	4:14	
X				6/26/2019 09:17 AM	6/26/2019 03:57 PM	80961700 - 00-Student Asst-Biology	6:40	8.25	6:40	
X				6/27/2019 08:56 AM	6/27/2019 10:32 AM	80957900 - 00-Student Asst-Physics Astron	1:36	9.00	1:36	21
X				7/1/2019 09:12 AM	7/1/2019 12:31 PM	80961700 - 00-Student Asst-Biology	3:19	8.25	3:19	
X				7/2/2019 09:05 AM	7/2/2019 12:26 PM	80961700 - 00-Student Asst-Biology	3:21	8.25	3:21	
X				7/3/2019 12:02 PM	7/3/2019 03:25 PM	80961700 - 00-Student Asst-Biology	3:23	8.25	3:23	10
X				7/6/2019 02:05 PM	7/6/2019 05:41 PM	80957900 - 00-Student Asst-Physics Astron	3:36	9.00	3:36	
X				7/6/2019 06:29 PM	7/6/2019 08:03 PM	80957900 - 00-Student Asst-Physics Astron	1:34	9.00	1:34	
X				7/8/2019 09:11 AM	7/8/2019 12:52 PM	80961700 - 00-Student Asst-Biology	3:41	8.25	3:41	
X				7/9/2019 09:24 AM	7/9/2019 12:28 PM	80961700 - 00-Student Asst-Biology	3:04	8.25	3:04	
X				7/10/2019 09:24 AM	7/10/2019 12:41 PM	80961700 - 00-Student Asst-Biology	3:17	8.25	3:17	
X				7/11/2019 10:24 AM	7/11/2019 12:43 PM	80961700 - 00-Student Asst-Biology	2:19	8.25	2:19	
X				7/11/2019 02:28 PM	7/11/2019 04:00 PM	80957900 - 00-Student Asst-Physics Astron	1:32	9.00	1:32	15
X				7/15/2019 09:58 AM	7/15/2019 01:02 PM	80961700 - 00-Student Asst-Biology	3:04	8.25	3:04	
X				7/16/2019 09:17 AM	7/16/2019 01:25 PM	80961700 - 00-Student Asst-Biology	4:08	8.25	4:08	
X				7/17/2019 11:57 AM	7/17/2019 01:33 PM	80957900 - 00-Student Asst-Physics Astron	1:36	9.00	1:36	
X				7/18/2019 09:22 AM	7/18/2019 12:00 PM	80961700 - 00-Student Asst-Biology	2:38	8.25	2:38	11
X				7/20/2019 02:07 PM	7/20/2019 08:00 PM	80957900 - 00-Student Asst-Physics Astron	5:53	9.00	5:53	
X				7/22/2019 10:40 AM	7/22/2019 02:25 PM	80961700 - 00-Student Asst-Biology	3:45	8.25	3:45	
X				7/23/2019 10:51 AM	7/23/2019 11:48 AM	80961700 - 00-Student Asst-Biology	0:57	8.25	0:57	
X				7/24/2019 10:56 AM	7/24/2019 12:48 PM	80961700 - 00-Student Asst-Biology	1:52	8.25	1:52	
X				7/24/2019 01:05 PM	7/24/2019 02:03 PM	80957900 - 00-Student Asst-Physics Astron	0:58	9.00	0:58	
X				7/25/2019 09:08 AM	7/25/2019 12:41 PM	80961700 - 00-Student Asst-Biology	3:33	8.25	3:33	16
X				7/29/2019 10:28 AM	7/29/2019 01:23 PM	80961700 - 00-Student Asst-Biology	2:55	8.25	2:55	
X				7/30/2019 09:17 AM	7/30/2019 12:12 PM	80961700 - 00-Student Asst-Biology	2:55	8.25	2:55	
X				7/30/2019 02:33 PM	7/30/2019 04:07 PM	80961700 - 00-Student Asst-Biology	1:34	8.25	1:34	
X				7/31/2019 09:26 AM	7/31/2019 12:02 PM	80961700 - 00-Student Asst-Biology	2:36	8.25	2:36	
X				8/2/2019 09:43 AM	8/2/2019 12:39 PM	80961700 - 00-Student Asst-Biology	2:56	8.25	2:56	12
X				8/3/2019 02:12 PM	8/3/2019 05:18 PM	80957900 - 00-Student Asst-Physics Astron	3:06	9.00	3:06	
X				8/3/2019 06:13 PM	8/3/2019 07:43 PM	80957900 - 00-Student Asst-Physics Astron	1:30	9.00	1:30	

20083343 - Amethyst Haynes										
Hours - 06/01/2019 to 08/16/2019										
O	Note	Edit	Brk	Time in	Time out	Task Code	Hours	Rate	Shift total	Week to
X				8/5/2019 09:28 AM	8/5/2019 01:22 PM	80961700 - 00-Student Asst-Biology	3:54	8.25	3:54	
X				8/6/2019 10:28 AM	8/6/2019 12:39 PM	80961700 - 00-Student Asst-Biology	2:11	8.25	2:11	
X				8/6/2019 02:30 PM	8/6/2019 03:38 PM	80961700 - 00-Student Asst-Biology	1:08	8.25	1:08	
X				8/7/2019 09:30 AM	8/7/2019 02:13 PM	80961700 - 00-Student Asst-Biology	4:43	8.25	4:43	
X				8/9/2019 10:48 AM	8/9/2019 12:59 PM	80961700 - 00-Student Asst-Biology	2:11	8.25	2:11	18
X				8/12/2019 10:47 AM	8/12/2019 02:39 PM	80961700 - 00-Student Asst-Biology	3:52	8.25	3:52	

Figures 1–4: (1) Malaise trap, (2) vane trap, (3) elevated pan traps in wet savanna, (4) ground pan traps in wet savanna recently subjected to a prescribed burn.



Figures 5–8: Vehicle rental records.

5 **ENTERPRISE** Rental Agreement 5HV58H Inbox x

DoNotReply@erac.com

to DANBEN789 ▾



RA #: 5HV58H

Renter: BENNETT,DANIEL

Dates & Times	Location
Pickup	
Apr 19, 2019	1609 NORTH ST
4:07 PM	NACOGDOCHES, TX 75965-4042
	9365649988
Return	
Apr 21, 2019	1609 NORTH ST
1:24 PM	NACOGDOCHES, TX 75965-4042
	9365649988

Vehicle	
Make/Model: NISN/ROGU	
Color: BLUE MED	
Mileage: 443	
Fuel Out: Full	Fuel In: Full
License: 8FNK389	
Unit #: 7R63XV	Vehicle #: KP510800

Charges	Price/Unit	Total
Less Bill To - STEPHEN F AUSTIN BILLING:		\$112.00
Total Charges:		\$0.00

2019-04-22 13:25:55



1609 NORTH ST
NACOGDOCHES, TX 75965-4042

Rental Agreement #: 5N9S48
Bill Ref #: 6000-3170-5770
Invoice Date: Not Yet Billed
Account #: UTS611

BILLING DETAIL

Description	Qty/Per	Rate	Amount
TIME & DISTANCE	3 DAY	36.00	108.00
Subtotal			108.00

BILL TO

STEPHEN F AUSTIN BILLING
 ATTN: LYNNETTE HONEA
 PO BOX 6085
 NACOGDOCHES, TX - 75962

Amount Due (USD) 108.00

Individual line item charges such as rental rates for Time and Distance, percentage-based charges (e.g., sales taxes and fees or surcharges), and charges divided between multiple parties may be rounded up or down a whole cent to ensure that the charges equal the actual Total Amount Due and/or to avoid fractional cents.

RENTAL INFORMATION

Date/Time Out 05/03/2019 05:00 PM
Date/Time In 05/06/2019 05:00 PM

Renter
 BENNETT, DANIEL

RENTAL VEHICLES

Color	License	Model	Unit	Miles/Kms	
				Out	In
BLUE DK	LNF5148	ELAN	7RY1B5	11,242	11,887
VIN: 5NPD84LF9KH443089					

CLAIM INFORMATION

Claim# / PO# / RO# 20666126120150
Insured 1234
Date of Loss **Type of Loss** **Type of Vehicle**
 Repair Shop

For Billing Inquiries / Payment Terms :
 Tel#:+1 5129120332
 NTXAUSTINADMIN@EHI.COM
 Payment Due within 30 days of invoice date
 Late payments are subject to a finance charge.



ADDITIONAL INFORMATION

FOAP # 20666126120150 TA# 1234

Thank You For Choosing Enterprise

Please Return This Portion With Remittance		Amount Due (USD)	108.00
Remit To : ENTERPRISE RENT-A-CAR COMPANY 4210 S CONGRESS AVE AUSTIN, TX 78745-1104		Paid By: STEPHEN F AUSTIN BILLING PO BOX 6085 NACOGDOCHES, TX 75962	
Fed Tax Id: 26-4086616	Account # UTS611	Rental Agreement 5N9S48	Amount 108.00 GPBR 5110

Trip #3



1609 NORTH ST
NACOGDOCHES, TX 75965-4042

Rental Agreement #: 5SH4NP
Bill Ref #: 6000-3195-1208
Invoice Date: 05/21/2019
Account #: UTS611

BILLING DETAIL			
Description	Qty/Per	Rate	Amount
TIME & DISTANCE	2 DAY	58.00	112.00
TIME & DISTANCE	1 HR	18.48	18.48
Subtotal			130.48

BILL TO

STEPHEN F AUSTIN BILLING
ATTN: LYNNETTE HONEA
PO BOX 6085
NACOGDOCHES, TX - 75962

RENTAL INFORMATION

Date/Time Out: 05/16/2019 04:48 PM
Date/Time In: 05/18/2019 06:00 PM

Renter: BENNETT, DANIEL
Additional Driver: SAULS, ARCHIE RAY JR

20069094

Amount Due (USD) 130.48
Individual line item charges such as rental rates for Time and Distance, percentage-based charges (e.g. sales taxes and fees for surcharges), and charges divided between multiple parties may be rounded up or down a whole cent to ensure that the charges equal the actual Total Amount Due and/or to avoid fractional cents.

TA 017182
206661-26120 - -150

RENTAL VEHICLES

Color	License	Model	Unit	Miles/Kms Out In
GRAY DK	LPG8773	TUCS	7RB369	5,065 5,495
VIN: KM8J23A45KU914978				

CLAIM INFORMATION

Claim# / PO# / RO# : 20666126120150
Insured : 1234
Date of Loss :
Type of Loss :
Type of Vehicle :
Repair Shop :

RECEIVED
MAY 23 2019
CONTROLLER/AP

For Billing Inquiries / Payment Terms :

Tel#: +1 5129120332
NTXAUSTINADMIN@EHI.COM
Payment Due within 30 days of invoice date
Late payments are subject to a finance charge.

ADDITIONAL INFORMATION

FOAP # : 20666126120150 TA# : 1234

Thank You For Choosing Enterprise

Please Return This Portion With Remittance		Amount Due (USD)	130.48
Remit To : ENTERPRISE RENT-A-CAR COMPANY 4210 S CONGRESS AVE AUSTIN, TX 78745-1104		Paid By: STEPHEN F AUSTIN BILLING PO BOX 6085 NACOGDOCHES, TX 75962	
Fed Tax Id: 26-4088816	Account # UTS811	Rental Agreement 5SH4NP	Amount 130.48 GPBR 5110

Cassidy Owens

ENTERPRISE Rental Agreement 5YBMZV ▶ **Inbox** x

DoNotReply@erac.com
to DANBEN789 ▾



RA #: 5YBMZV

Renter: BENNETT,DANIEL

Dates & Times	Location
Pickup May 31, 2019 5:48 PM	1609 NORTH ST NACOGDOCHES, TX 75965-4042 9365649988
Return Jun 02, 2019 6:00 PM	1609 NORTH ST NACOGDOCHES, TX 75965-4042 9365649988

Vehicle	
Make/Model: NISN/ARMA	
Color: SILVER	
Mileage: 425	
Fuel Out: 1/2	Fuel In: 1/2
License: N473685	
Unit #: 7S3HHY	Vehicle #: K9583760

Charges	Price/Unit	Total
Less Bill To - STEPHEN F AUSTIN BILLING:		\$142.00
Total Charges:		\$0.00

2019-06-03 10:02:29

Fig 9. Fuel receipts charged for rental vehicles.

RICK'S
 3505 SOUTH ST.
 NACOGDOCHES, TX.
 437374
 Ricks
 3505 south St.
 Nacogdoches tx 75964

Description	Cty	Amount
UNLEAD CR #06	6.4906	16.87
SELF # 2.599/ G		
	Subtotal	16.87
	Tax	0.00
TOTAL		16.87
	CREDIT \$	16.87

MASTERCARD
 XXXXXXXXXXXX8139
 Entry Method: Swiped
 Auth #: 91129Z
 Resp Code:
 Stan: 0237264612
 Invoice #: 3181E3
 Store # *****
 SITE ID: 437374
 TERMINAL ID: 002

**THANK YOU
 COME BACK
 SOON**

ST# RICKS TILL: XXXX DR# C TRAN# 9063158
 CSH: 0 04/21/19 19:04:58

Welcome To
 Stripes #5273
 3104 N University Dr
 Nacogdoches, Tx 75965
 (936) 564-2221
 CHECKPOINT
 3104NUniversity
 Nacogdoches TX
 75965

DATE 05/17/19 19:58
 TRAN# 9018444
 PUMP# 01
 SERVICE LEVEL: SELF
 PRODUCT: UNLEAD
 GALLONS: 12.715
 PRICE/G: \$ 2.559
 FUEL SALE \$ 32.54
 CREDIT \$32.54

Mastercard
 *****8139
 Entry Method: Swiped
 Auth #: 91716Z
 Resp Code:
 Stan: 002355943
 Invoice #: 46339
 Store # 4548150
 SITE ID: 113864
 TERMINAL ID: 001

Pilot #1023
 1920 East Derman Ave
 Lufkin TX 75901
 936-899-7101
 Invoice # 53289
 Date 04/21/19
 Time 07:37
 Auth # 70125Z

MC
 Acct#
 #####8139
 Pump Gallons Price
 18 10.000 \$ 2.499
 Product Amount
 Unleaded \$ 25.01
 Total Sale \$ 25.01

SALE - Card Swiped

Thank You For
 Choosing Pilot

RICK'S
 3505 SOUTH ST.
 NACOGDOCHES, TX
 Ricks
 3505 south St.
 Nacogdoches tx
 75964

DATE 05/18/19 18:28
 TRAN# 9015296
 PUMP# 01
 SERVICE LEVEL: SELF
 PRODUCT: UNLEAD
 GALLONS: 1.963
 PRICE/G: \$ 2.609
 FUEL SALE \$ 5.30
 CREDIT \$5.30

MASTERCARD
 XXXXXXXXXXXX8139
 Entry Method: Swiped
 Auth #: 81813Z
 Resp Code:
 Stan: 0264306988
 Invoice #: 367183
 Store # *****
 SITE ID: 437374
 TERMINAL ID: 002

**THANK YOU
 COME BACK SOON**

Welcome to Shell
 Welcome To
 Stripes #5276
 705 S. Magnolia St.
 Woodville, Tx 75979
 10089657018
 SHELL
 719 S MAGNOLIA ST
 WOODVILLE TX
 75979

DATE 05/04/19 17:07
 TRAN# 9074118
 PUMP# 07
 SERVICE LEVEL: SELF
 PRODUCT: UNLEAD
 GALLONS: 10.902
 PRICE/G: \$ 2.599
 FUEL SALE \$ 28.33
 CREDIT \$28.33

XXXX XXXX XXXX 8139
 MASTERCARD
 Swiped
 APPROVED
 AUTH # 71405Z
 INV # 506139

Local Store Discount
 Join Fuel Rewards
 Never Pay Full Price
 Save on every fill
 fuelrewards.com/gold

RICK'S
 3505 SOUTH ST.
 NACOGDOCHES, TX
 Ricks
 3505 south St.
 Nacogdoches tx
 75964

DATE 06/02/19 19:37
 TRAN# 9038560
 PUMP# 03
 SERVICE LEVEL: SELF
 PRODUCT: UNLEAD
 GALLONS: 7.310
 PRICE/G: \$ 2.599
 FUEL SALE \$ 19.00
 CREDIT \$19.00

MASTERCARD
 XXXXXXXXXXXX8139
 Entry Method: Swiped
 Auth #: 91209Z
 Resp Code:
 Stan: 0278331263
 Invoice #: 394334
 Store # *****
 SITE ID: 437374
 TERMINAL ID: 002

**THANK YOU
 COME BACK SOON**

Pilot #1023
 1920 East Derman Ave
 Lufkin TX 75901
 936-899-7101
 Invoice # 68981
 Date 05/06/19
 Time 08:17
 Auth # 80805Z

MC
 Acct#
 #####8139
 Pump Gallons Price
 19 7.044 \$ 2.599
 Product Amount
 Unleaded \$ 18.31
 Total Sale \$ 18.31

SALE - Card Swiped

Thank You For
 Choosing Pilot
 Please Come Again

Fig. 10. Fuel receipts charged to grant for Biology departmental vehicle. Adjusted (handwritten) values reflect tax exempt amounts.

Charge Big Trucket .grant
Bennett

RICK'S
3505 SOUTH ST.
MACDOUCHES, TX.
437874
Ricks
3505 south St.
Macodoches tx 75664

Description	Qty	Amount
UNLEAD CR #03	13.2088	33.01
SELF @ 2.499/ G		
Subtotal		33.01
Tax		0.00
TOTAL		33.01
CREDIT \$		33.01

- 2059 (e)

VOYAGER
XXXXXXXXXXXXXXXXXXXX0583
Entry Method: Swiped
Auth #: 588883
Odometer: 77612
Resp Code:
Stan: 0283354391
Invoice #: 420021
SITE ID: 437874
TERMINAL ID: 002

**THANK YOU
COME BACK
SOON**

ST# RICKS TILL XXXX DR# 0 TRAN# 9039299
CSH: 0 08/16/19 17:34:30

06

Charge Fuel to
Big Trucket grant
Bennett

Pilot #1823
1928 East Denman Ave
Lufkin TX 75681
838-869-7191

Invoice # 9812
Date 08/16/19
Time 06:37
Auth # 138245

VF
Acct#
*****8883

Pump Gallons Price
#3 19.551 \$ 2,388

Product Amount
Unleaded \$ 46.99

Total Sale \$ 46.99

- 43.32

SALE - Card Swiped

Odometer: 77323

Thank You For
Choosing Pilot
Please Come Again

**WELCOME TO
H&Z TEXACO**
630-589-8921
00304170
TEXACO

1626 N UNIVERSITY
MACDOUCHES TX

< DUPLICATE RECEIPT >

Description	Qty	Amount
UNLEADED CR #02	15.7416	39.34
SELF @ 2.499/ G		
Subtotal		39.34
Tax		0.00
TOTAL		39.34
CREDIT \$		39.34

(i)

Charge Big Trucket
Bennett Grant

WELCOME TO H&Z
00304170
TEXACO
1626 N UNIVERSITY
MACDOUCHES TX

DATE 7/17/19 8:59
TRAN# 9081961
PUMP # 03
SERVICE LEVEL: SELF
PRODUCT: UNLEADED
GALLONS: 16.680 (i)
PRICE/G: \$ 2.499
FUEL SALE \$41.68
CREDIT \$41.68 - 38.63 (i)

*****0653
Stn# 00304170

VOYAGER

Inv# 7025408
Auth# 301890
Entry Method: Swipe
d
00 77951

Earn up to 6cents
per gal with the
Chevron Texaco
Business Card
Program. Call
1.888.531.3717

THANK YOU
HAVE A RICE DAY

*****0883
Stn# 00304170

VOYAGER

Inv# 7025899
Auth# 785418
Entry Method: Swiped
00 77732

Earn up to 6cents
per gal with the
Chevron Texaco
Business Card
Program. Call
1.888.531.3717

THANK YOU
ST# 1 TILL XXXX DR# 0 TRAN# 8099499

Fig 10 cont. Fuel receipts charged to grant for Biology departmental vehicle. Adjusted (handwritten) values reflect tax exempt amounts.

	Aug July	April																				
<p>Charge fuel to Big Trucket Grant Bennett</p> <p>WELCOME TO H&Z TEXACO 838-589-8821 00304170 TEXACO 1626 N UNIVERSITY NACOGDOCHES TX</p> <p>< DUPLICATE RECEIPT ></p> <table border="1"> <thead> <tr> <th>Description</th> <th>Qty</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>UNLEADED CR 808</td> <td>14.948</td> <td>36.69</td> </tr> <tr> <td>SELF @ 2.589/ G</td> <td></td> <td></td> </tr> <tr> <td>Subtotal</td> <td></td> <td>36.69</td> </tr> <tr> <td>Tax</td> <td></td> <td>0.00</td> </tr> <tr> <td>TOTAL</td> <td></td> <td>36.69</td> </tr> <tr> <td>CREDIT \$</td> <td></td> <td>36.69</td> </tr> </tbody> </table> <p>*****0693 Stn# 00304170</p> <p>VOYAGER</p> <p>Inv# 7029805 Auth# 275950 Entry Method: Swiped TD 78162</p> <p>Earn up to 8cents per gal with the Chevron Texaco Business Card Program. Call 1.888.691.3717</p> <p>THANK YOU ST# 1 TILL XXXX DR# 0 TRAN# 9082147 CSH: 0 7/13/18 2:53:48 PM</p>	Description	Qty	Amount	UNLEADED CR 808	14.948	36.69	SELF @ 2.589/ G			Subtotal		36.69	Tax		0.00	TOTAL		36.69	CREDIT \$		36.69	<p>Bennett Big Trucket Research</p> <p>RICK'S 3505 SOUTH ST NACOGDOCHES, TX</p> <p>Ricks 3505 South St. Nacogdoches tx 75964.</p> <p>DATE 04/05/19 18:57 TRAN# 9082997 PUMP# 09 SERVICE LEVEL: SELF PRODUCT: UNLEAD GALLONS: 16.429 PRICE/G: \$ 2.499 FUEL SALE \$ 41.06 CREDIT \$ 41.06 - 38.06</p> <p>VOYAGER XXXXXXXXXXXX2692 Entry Method: Swiped Auth #: 758342 Odometer: 39722 Resp Code: Stan: 022244369 Invoice #: 244068 SITE ID: 437374 TERMINAL ID: 002</p> <p>THANK YOU COME BACK SOON</p>
Description	Qty	Amount																				
UNLEADED CR 808	14.948	36.69																				
SELF @ 2.589/ G																						
Subtotal		36.69																				
Tax		0.00																				
TOTAL		36.69																				
CREDIT \$		36.69																				
<p>charge fuel to Big Trucket Grant Bennett</p> <p>RICK'S 3505 SOUTH ST, NACOGDOCHES, TX</p> <p>Ricks 3505 south St. Nacogdoches tx 75964</p> <p>DATE 07/17/19 17:10 TRAN# 9031107 PUMP# 03 SERVICE LEVEL: SELF PRODUCT: UNLEAD GALLONS: 18.796 PRICE/G: \$ 2.599 FUEL SALE \$ 35.86 CREDIT \$ 35.86 - 33.34</p> <p>VOYAGER XXXXXXXXXXXX0693 Entry Method: Swiped Auth #: 506503 Odometer: 78367 Resp Code: Stan: 0324405066 Invoice #: 477860 SITE ID: 437374 TERMINAL ID: 002</p> <p>THANK YOU COME BACK SOON</p>	<p>Charge fuel to Big Trucket grant Bennett</p> <p>RICK'S 3505 SOUTH ST, NACOGDOCHES, TX</p> <p>Ricks 3505 south St. Nacogdoches tx 75964</p> <p>DATE 07/18/19 16:37 TRAN# 9095746 PUMP# 09 SERVICE LEVEL: SELF PRODUCT: UNLEAD GALLONS: 14.024 PRICE/G: \$ 2.499 FUEL SALE \$ 35.05 CREDIT \$ 35.05 - 32.48 (1)</p> <p>VOYAGER XXXXXXXXXXXX0693 Entry Method: Swiped Auth #: 709499 Odometer: 78577 Resp Code: Stan: 0325406535 Invoice #: 479543 SITE ID: 437374 TERMINAL ID: 002</p> <p>THANK YOU COME BACK SOON</p>																					