PRIVATE RV (ROOFTOP TENT) CAMPING IN SOUTHERN THAILAND

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Abstract: Recreational Vehicles (RVs) with rooftop tent for camping have become popular in Thailand from about 2016 on, prior to the COVID-19 pandemic. However, no proper outdoor hospitality parks (OHPs) were available for these campers. This study aimed to investigate RV (rooftop tent) camping focusing on private properties in the context of southern Thailand, because there has been less such camping in this area than in other areas of Thailand. The representatives of 11 private OHPs from 11 provinces, of the totally 14 provinces in southern Thailand, were initially selected by purposive sampling. Data were collected by survey, observation, digital photography, pilot study, and interviews with 11 representatives of the OHP operators. The data were subjected to descriptive analysis and triangulated with other outcomes. It was found that suitable RV (rooftop tent) camping parks varied from small to large in the following order: Songkhla, Phanggna, Trang, Phatthalung, Satun, Chumporn, Suratthani, Ranong, Krabi, Nakhon Si Thammarat, and Phuket provinces. Likewise, the suitable time for camping in the shade (not in direct sunlight) was from 04.00 p.m. to 10.00 a.m.

Key words: Enjoyment, Outdoor Hospitality Park (OHP), RV, Rooftop Tent Camping, Southern Thailand, Responsibility, Safety

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INTRODUCTION

Camping in general combines inexpensive outdoor accommodation with a form of recreational outdoor activity where individuals spend time - a day or up to several nights - away from home (Brooker and Joppe, 2013; Craig, 2019, 2020; Hewer et al., 2015; Lu et al., 2022; Ma et al., 2020; Radović et al., 2021; Sánchez-Sánchez and Sánchez-Sánchez, 2022). Ma et al. (2020) divided camping into three types: tent, recreational vehicle (RV), and cabin. Earlier, Brooker and Joppe (2013) had listed five types, classing caravans and RVs as two separate types of camping, and included a further type, glamping. Camping in Thailand began in the National Park areas—government properties—that provided cabins and/or tents for visitors to rent. More recently, many private properties have also provided tents and outdoor hospitality parks (OHPs) for tourists.

Details of cabin reservations and camping fees have been advertised on the National Park webpage and at other relevant websites. The camping fees for government and private properties are even more heavily advertised on social media, such as Facebook, which is free of charge. Tourists in Thailand continue to enjoy their long-accepted practice of traditional camping, with tents and cabins, particularly because they are inexpensive compared to other types of tourism. Although recreational vehicles (RVs) have been in favor elsewhere since the 1960's, especially in Europe, North America, and Australia (Hardy and Kirkpatrick, 2017; Rogerson and Rogerson, 2020; Ward, 1987), such trend of travelers using their own vehicles adjusted to include accommodation was just beginning in Thailand in 2016 (MGR Online, 2016; NationTV, 2016; Pajondotcom, 2016; Sommano, 2016; Thairath, 2016). At that time dealers selling gear specifically for travelers also began appearing. However, no proper OHP arrangements were then available: proper parking spaces and other appropriate infrastructure were lacking.

As a result, recreational vehicle users (or RVers) parked their cars in public areas, such as temples, department store parking lots, airports, and police stations. This disturbing behavior affected both the nearby local people and their environment negatively, according to Connell and Page (2008), who addressed environmental impacts such as traffic congestion, parking space occupancy (especially in beautiful scenery), and the limits of the carrying capacity of the local people.

More recently, with extended availability of appropriate facilities, interest in RV (rooftop tent) camping has grown immensely. According to Off Road Tents (2019), the strengths of RV rooftop tents can reduce the problems of traditional camping on the ground: for example, the RV (rooftop tent) camper is away from dangerous animals and unwanted creatures like snakes and spiders; there is no disturbance from humidity in the soil, ground, and vegetation; the RV (rooftop tent) camping does not need a flat spot so there is no longer a problem with mud and/or rocks or tree roots; and the RV (rooftop tent) camper gets better (elevated) views and the best photos. Consequently, the purposes of this study were: firstly, to survey the appropriate sites for tourism, focusing on private properties of southern Thailand for RV (rooftop tent) camping; secondly, to carry out a pilot study on tourism focused on private properties of southern Thailand with RV (rooftop tent) camping; and lastly, to recommend an optimal model for tourism with focus on private properties of southern Thailand with RV (rooftop tent) camping. No prior study on these topics has been reported in the literature.

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LITERATURE REVIEW

RV (rooftop tent) camping is a camping type using an RV (a recreational vehicle) capable of accepting a rooftop tent attached temporarily onto the vehicle, which may be a truck, sports utility vehicle (SUV), or van (see Figure 5 (a)). This RV (rooftop tent) camping style has recently become popular in Thailand because it is less expensive than other traditional RVs, according to KOA (2020) and GORVing (2021). Although we do not know any prior research on RV (rooftop tent) camping, either elsewhere or in context of Thailand, recent research was found on general camping, and on RV (but not RV rooftop tent camping), and on OHP. Rogerson and Rogerson (2020) reviewed camping tourism concept and presented that most camping tourism studies were from the Northern hemisphere, mainly from Europe and North America.

Similarly, Ding et al. (2021) mentioned that, in the United States, one-third of the tourism land, one-third of the tourism time, and one-third of the tourism accommodation facilities are for camping. However, camping activity is also found in Australasia, Africa, as well as in Asia proper, for example in China and in Japan. Camping has been on an increase, especially during COVID-19, while other types of tourism were declining, because it has been considered safe due to a well ventilated open-air natural environment, while also being accessible, and enabling social distancing standards to be maintained (Craig et al., 2021). Ding et al. (2021) studied factors related to site selection for self-driving and RV camps in China, quite similar to those in the current study, and found that RV campers selected RV campsite or OHP by transportation accessibility, parking policy, camping facilities, nearby tourist resource condition, and quality of ecological environment, topography, climate and disaster, as well as water source conditions. Craig and Ma (2022) focused more on weather and disasters. Both of these studies were similar to the recent research studies by Buckley (2004) and Sawatdichai (2012) that focused on camping and observed the following issues: 1) natural environment (slope; shading; chances to see wild animals; scenery; and safety from dangerous plants, animals, and natural disasters); and 2) physical development (camping area size; water availability; and basic facilities such as toilet, washing areas, and rubbish bins). This current study therefore observed and assessed these issues, and recommends appropriate private RV (rooftop tent) camping areas.



Resource and Environment (Cartographer), 2022

Note: This figure was produced purposely for only this research article)

MATERIALS AND METHODS

This was qualitative research that firstly reviewed the secondary data from potential private OHPs in 11 provinces of southern Thailand. These OHPs represented six provinces of the Andaman region (Ranong, Phangnga, Phuket, Krabi, Trang, and Satun), and five provinces of the Thai Gulf region (Chumphon, Suratthani, Nakhon Si Thammarat, Phatthalung, and Songkhla). The three southernmost provinces of Thailand suffer from an insurgency, and were not included in this research study due to the ongoing conflict bringing safety issues (Figure 1).



Figure 2. Research Methodology Steps (Source: The authors' elaboration)

Secondly, the private OHPs were initially selected by purposive sampling, mainly of the ones that extensively advertised on social media, such as Facebook, and from websites that also provided basic facilities for RV (rooftop tent) camping to prevent negative impacts to the environment, especially regarding trash, wastewater, and local disturbance. These OHPs were also selected because of their variety of environments, including mountains, streams, gardens, and beaches, in provinces with more than one OHP. The survey was conducted from January to August 2020 at the suggested optimum time period for each region (January to March at Andaman, and June to August at Thai Gulf). Ranong province was surveyed outside its optimum time period due to both COVID-19 and project schedule restrictions. Various methods to measure the aspects—area size, area shading, and area slope in particular—were employed in each OHP area for later comparisons, in order to suggest the optimum sites representative of each province. Details of area size, area shading, and area slope assessments are now explained.

Area Size Analysis

Area size is usually known when the property owner applies for a land certificate. Advice here is on how to measure area size, especially at the area where the RV (rooftop tent) is allowed to camp, so that the OHP manager knows the carrying capacity of the area. In this study we used GPS measurements as follows: Recorded data of Latitude and Longitude of the rooftop tent parking area from the GPS (or by using a free smartphone GPS application), which was converted to a polygon by digitizing the area boundary on a map. Area sizes were then calculated by using the "calculate geometry" function in the ARCGIS 10.7 with square meters chosen for the unit (Muneenam and Suwannattachote, 2021).

Area Slope Analysis

The area slope was measured to suggest appropriate areas for camping. Off Road Tents (2019) suggested that a rooftop tent vehicle does not need a flat parking spot. However, Williams and Marion (1995, cited in Leung and Marion, 2004) noted concerns about density of camping tourists, suggesting not to camp at 0-2%, the level most campers prefer. Previously Sawatdichai (2012) used the "Abney level" technique to measure area slope. However, in this study the approach followed Muneenam and Suwannattachote's (2021) explanation of how to measure the slope. For area slope, firstly analyze the recorded data of Latitude and Longitude from the GPS (or from the free GPS application for smartphone) with the "Spatial 3D Analyst", then interpret by coding them into slope levels. For example, green means a low slope of less than 15 degrees; a slope of 15–29 degrees is presented as yellow; and more than 30 degrees is presented as red (Figure 3).

No.	Province (Scenery)	Parking Fee (Baht/Day)	Area Size (Square metre)	Range of Sloping Level	Rubbish Bin	Shared Toilet & Showers	Cooking Facilities	Restaurant	Survey Time in 2020
1	Ranong (canal environment)	100	836.93	0-4 ⁰ (0-6.99%)	~	~	✓ Do not allowed to fire stove directly on the grass/ground	~	AUG
2	Phangnga (mountain environment)	200	222.67	2-8 ⁰ (3.49- 14.05%)	✓	~	\checkmark	~	JAN
3	Phuket (garden environment)	500	2,449.00	0-4 ⁰ (0-6.99%)	~	~	~	~	JAN
4	Krabi (Thai style farm environment)	100	1,459.67	4-10 ⁰ (6.99- 17.63%)	~	~	~	~	FEB
5	Trang (rice field environment)	150	259.82	0-2 ⁰ (0-3.49%)	✓ Recycle Bin	~	√	~	MAR
6	Satun (canal environment)	200	416.00	0-4 ⁰ (0-6.99%)	~	~	✓	~	FEB
7	Chumphon (mountain environment)	150	623.00	0.8-60 ⁰ (1.40- 173.20%)	~	~	~	~	JUL
8	Suratthani (forest environment)	100	676.00	0-4 ⁰ (0-6.99%)	~	✓ Warm water available	~	~	JUN
9	Nakhon Si Thammarat (beach environment)	500	1,600.00	0-6 ⁰ (0-10.51%)	✓ Recycle Bin	~	✓ Do not allowed to cook foul-smelling seafood	~	JUL
10	Phatthalung (waterfall environment)	100/Person	300.00	4-10 ⁰ (6.99- 17.63%)	✓	~	✓	~	JUN
11	Songkhla (canal environment)	100	133.37	0-2 ⁰ (0-3.49%)	~	~	✓	\checkmark	AUG

Table 1. Basic information regarding a sampling of RV (rooftop tent) outdoor hospitality parks (Source: The authors' elaboration)

Area Shading Analysis

Measuring area shade from sunlight helps to find where and when the shade provides the best time for comfortable camping. The simplest way for campers to make this assessment is by observing shading during camping. Shading from trees and buildings, for example, is very helpful to rooftop campers, if they have not come prepared with extra accessories, such as

awnings and fly sheets. However, in this study shade area was measured using the GPS, calculating the result in several steps (Figure 4). First, find the recorded data of Latitude and Longitude at the parking area using the GPS or the GPS application on smart mobile phone; and use it together with digital photo records, as well as recordings of trees including types of trees, their height and width. Second, these data are gathered into the ARCGIS 10.7 program, and converted into a polygon to calculate the area size. Third, set up the tree data, as found from the survey and from Google Earth, in a simulated picture by digitizing shades from trees and buildings with the ArcScene function in order to analyze the shading simulation via the Sun Shade Volume tool, which is then presented in a 3D picture (Muneenam and Suwannattachote, 2021).

In addition, in-depth interviews with managerial representatives of the private 11 OHPs, together with pilot camping study, observations, voice recordings, notes, and digital photos were recorded with permission, in order to collect information supporting later recommendations for the optimum model for RV (rooftop tent) camping in southern Thailand. The collected data were analyzed with narration analysis, and cross-checked by the triangulation technique (Figure 2).

RESULTS AND DISCUSSION

Rooftop Camping in Southern Thailand

Table 1 outlines basic information regarding the OHP facilities at the time of the survey; full details for the 11 selected OHPs, describing how things were when the survey was done during January to August 2020 and highlighting what might have changed since (pricing and extended campsites) were found for the selected OHP sites in 11 provinces.





Figure 3. Slopes of RV (rooftop tent parking) areas (Source: The authors' elaboration)

In addition, Table 1 and Figure 3 also present slopes of 11 RV (rooftop tent) OHPs. Five among the eleven of them were in the optimum range of slopes, namely 2–4%, and the slope should not be over 15%. However, Krabi, Phatthalung, and Chumphon provinces had some parts of the camping areas with over 15% slope, which is excessive, as well as Trang and Songkhla provinces also had planar land between 0–2% that might be too densely packed with tourists (Leung and Marion, 2004; Sawatdichai, 2012). However, results from a pilot camping study did not find a high density of tourists, which might be because of the pilot camping studies were not on a long weekend or on a holiday.



Figure 4. Simulated pictures of shading at OHP (Source: The authors' elaboration)

Figure 4 presents area shading of 11 RV (rooftop tent) OHPs indicating that shades from 04.00 p.m. to 10.00 a.m. were optimal for camping, concordant to the results from a pilot camping study which found that RV (rooftop tent) campers were naturally found in a good spot for camping under the shade, from trees, cliff, mountain range, and/or buildings. Besides, after 10.00 a.m. was a good time to pack the tent when the morning dew had dried.

Plants and Animals

Tourists were able to see a variety of animals, here divided into birds, small and medium sized animals, poisonous plants, and dangerous animals, as presented in Tables 2-6.

Table 2. Birds listed alphabetically from in-depth interviews (Source: The authors' elaboration)

Table 3. Small sized wild animals from in-depth interviews (Source: The authors' elaboration)

Bird's Name	Details	Place(s) to Meet	Small Sized Wild Animals' Name	Details	Place(s) to Meet
Asian Koet	Scientific Name: Fudynamys scolopaceus	9	Asian Mongoose	Scientific Name: Hernestidae	1
Tishun Koct	Family: Cuculidae	,	risiun mongoose	Family: Mongoose	- 1
Asian Onenhill	Scientific Name: Anastomus oscitans	3	Asian Tortoise	Scientific Name: Indotestudo	4
Asian Openom	Family: Ciconjidae	5	Tislull Tortoise	Family: Testudinidae	
Banded			Rengal Monitor	Scientific Name: Varanus bangalansis	3.9
Kingfisher	Scientific Name: Lacedo pulchella	10	Deligar Wollitor	Family: Varanidae	5,7
Tinghisher	Family: Alcedinidae		Butterfly	Scientific Name: Chagtodon trifascatus	8
Barbet	Scientific Name: Megalaimidae	9	Dutteriny	Family: -	0
Durbet	Family: Megalaimidae	,	Cicada	Scientific Name: Cicadidae	10
Rlue-eared			Cicaua	Family: Cicadidae: Westwood 1840	10
Kingfisher	Scientific Name: Alcedo meninting	8	Civet	Scientific Name: Viverrocula indica	1
Tinghisher	Family: Alcedinidae			Family: Viverridae	1
Canary	Scientific Name: -	9	Dragonfly	Scientific Name: Anisophara	10
Cullury	Family: Oriolidae	,	Dragonny	Family: -	10
Commorant	Scientific Name: <i>Phalacrocoracidae</i>	1 10	Firofly	Scientific Name: Lampyridae	10
001111014110	Family: -	1, 10	Theny	Family: Lampyridae: Latreille, 1817	10
Crimson			Gibbons	Scientific Name: Hylobates lar	1 4 5
Sunbird	Scientific Name: Aethopyga siparaja	4	Gibbolis	Family: Hylobatidae	1, 4, 5
	Family: Nectariniidae		Clandular frog	Scientific Name: Hylarana alandulosa	1
Crow	Scientific Name: Corvus macrothynchos	9	Giandulai 110g	Family: Ranidae	1
	Family: Corvidae	-	Hog Badger	Scientific Name: Arctonyx collaris	4
Dove	Scientific Name: Streptopelia	5, 6, 9	Hog Dauger	Family: Mutelidae	
	Family: Columbidae	-) -) -	Insect	Scientific Name: Insecta	8 10
Falcon	Scientific Name: Falco	1	moter	Family: -	0,10
	Family: Falconidae		Jungle Cat	Scientific Name: <i>Felis chaus</i>	1
Great Hornbill	Scientific Name: Buceros bicomis	1,7	5	Family: Felidae	-
	Family: Bucerotidae		Langur, Leaf	Scientific Name: Trachypithecus	
Greater Racket-	Scientific Name: Diarurus paradisaus	1, 8,	Monkey	obscurus	0
tailed Drongo	Scientific Ivanie. Dicrurus paraaiseus	10		Family: Cerceopithecidae	
	Family: Dicruridae		Naked Catfishes,	Scientific Name: Baaridaa	10
Heron, Bittern,	Scientific Name: Ardae alba	1.3	Barid Catfishes	Scientific Name. Dugridde	10
Egret	Linnaeus, 1758	1, 0		Family: Bagridae; Hamilton, 1822	
	Family: Ardeidae		Pangolin	Scientific Name: Manis javanica	1, 4, 6
Oriental Magple	Scientific Name: Copsychus saularis	10		Family: Manidae	
KODIII	Family: Mussicanidae		Pig-tailed Macaque	Scientific Name: Macaca nemestrina	2,6
Pod Collarad	Scientific Name: Strantonalia	1.6		Family: Cercoptihecidae	4 0 11
Dove	tranauebarica	1, 0,	Red Junglefowl	Scientific Name: Gallus gallus	4, 8, 11
2010	Family: Columbidae	10		Family: Phasianidae	1
Red-whiskered			Red Palm Weevil	Scientific Name: <i>Knynchoporus</i>	8
Bulbul	Scientific Name: Pycnonotus jocosus	1, 2, 9		Family: Curculionidae	-
	Family: Pycnonotidae			Scientific Name: Naolissochailus	
Sarus Crane	Scientific Name: Grus antigone	5	Soro Brook Carp	soroides	10
	Family: Gruidae			Family: Cyprinidae	
Spotted Dove	Scientific Name: Streptopelia chinensis	10	Spiny Rock Crab	Scientific Name: <i>Thalamita crenata</i>	10
	Family: Columbidae		Spiny Rock Club	Family: Cyprinidae	10
Stripe-throated	Scientific Name: Pycnonotus finlaysoni	1 2 6		Scientific Name: <i>Callosciurus</i>	4, 7, 9,
Bulbul	(Strickland, 1844)	1, 2, 0	Squirrel	ervthraeus	11
	Family: Pycnonotidae		-	Family: Sciuridae	
Swallow	Scientific Name: Hirundinidae	1, 10	Stingless Bee	Scientific Name: Trigona sp.	8, 11
	Family: Hirundinidae; Rafinesque 1825			Family: Apidae	
White-rumped	Scientific Name: Copsychus	6	Treeshrew	Scientific Name: Scandentia	5, 10
Shama	malabaricus	Ŭ		Family: Tupaiidae	
	Family: Muscicapidae		Turtle	Scientific Name: -	4
Notes: $1 = RV$ (ro	ottop tent) parking area at Ranong pr	ovince;		Family: -	
$2 = \mathbf{RV}$ (rooftop te	nt) parking area at Phangnga province;	3 = RV	Waterfall Shrimp	Scientific Name: Macrobrachium sp.	10
(roottop tent) park	ing area at Phuket province; $4 = RV$ (roottop		Family: Atyidae	
tent) parking area a	at Krabi province; $5 = RV$ (roottop tent)	parking	Wild Pig	Scientific Name: Sus scrofa	1,7
area at Trand prove	\mathbf{n}_{CP} , $\mathbf{n} = \mathbf{K} \mathbf{V} \left(\mathbf{r}_{OOTO} \mathbf{n}_{OT} \mathbf{t}_{OT} \mathbf{n}_{O} \mathbf{n}_{OT} \mathbf{n}_{O} \mathbf{n}_{OT} \mathbf{n}_{O} \mathbf{n}_{$	ar Natum	1	Lionadry Suideo	1

area at Trang province; 6 = RV (rooftop tent) parking area at Satun Family: Suidae province; 7 = RV (rooftop tent) parking area at Chumphon province; 8 = RV (rooftop tent) parking area at Suratthani province; 9 = RV (rooftop tent) parking area at Nakhon Si Thammarat province; 10 = RV (rooftop tent) parking area at Phatthalung province; 11 = RV (rooftop tent) parking area at Songkhla province

Table 4. Medium sized wild animals from in-depth interviews (Source: The authors' elaboration)

Medium Sized Wild	Details	Place(s)
Animals' Name		to Meet
Deer	Scientific Name:	4
	Cervus univcolor	
	Family: Cervidae	
Tapir	Scientific Name:	1
	Tapirus indicus	
	Family: Tapiridae	

Table 5. Poisonous plants from in-depth interviews (Source: The authors' elaboration)

Poisonous Plants' Name	Details	Place(s) to Meet
Irritated Bamboo	Scientific Name: Bambuseae	1
	Family: Poaceae	
Needle Wood	Scientific Name: Schima walichii (DC.) Korth.	10
	Family: Theaceae	
Thatch Grass, Wolly Grass	Scientific Name: Laportea interrupta Chew	4, 10
	Family: Urticaceae	
Velvet Bean	Scientific Name: <i>Mucuna</i> pruriens DC.	1
	Family: Fabaceae	

Natural Disasters

Natural disasters or inconveniences were also found from the in-depth interviews, such as rain and cloudiness during monsoon season, strong sunshine, heavy winds and rainstorms that destroyed giant trees, flooding with high tide that may also leave the area messy from flood debris, and forest fires. The OHP in Trang province reported no experience of any natural disasters (Table 7), being the one exception.

Table 7. Natural disasters of 11 OHPs from in-depth interviews (Source: The authors' elaboration)

Type of Natural Disasters	Place(s) to Meet
Cloudy	2
Forest Fires	1
Flooding, Flash Flooding	1, 3, 4, 6, 10, 11
Rain Storm	2, 7, 8, 9
Strong Sunshine	9
Wind Storm	7,9

in-depth in	terviews (Source: The authors' elaboration	1)
Dangerous Animals' Name	Details	Place(s) to Meet
Black House Ant	Scientific Name: Paratrechina longicomis	4, 5
	Family: Formicidae	
Centipede	Scientific Name: <i>Scolopendra subspinpes</i> (Leach, 1815)	1, 2, 3, 10
	Family: Scolopendromorpha	
Copperhead Racer Snake	Scientific Name: Coelognathus radiata	8
	Family: Colubridae	
Culex Mosquito	Scientific Name: Culex spp.	1, 2, 3, 7, 8, 9, 10
	Family: Culicidae	
Fire Ant	Scientific Name: Solenopsis germinata	4, 8, 9, 10, 11
	Family: Formicidae	
Gecko	Scientific Name: <i>Gekko gecko</i> (Linnaeus, 1758)	2, 4, 8
	Family: Gekkonidae	
Giant Asian Toad	Scientific Name: Phrynoidis aspera	10
	Family: Bufonidae	
Green Pit Viper	Scientific Name: Trimeresurus spp.	10
	Family: Viperidae	
Honey Bee	Scientific Name: Anthophila	8
	Family: Apoidae	
House Gecko	Scientific Name: Hemidactylus	8
	Family: Gekkonidae	
King Cobra	Scientific Name: Ophiophagus hannah	4, 10
	Family: Elapidae	
Land Leech	Scientific Name: Hoemadipsa sp.	1
	Family: Haemadipsidae	
Little Honey Bee	Scientific Name: Apis florea Febricius	10
	Family: Apoidea	
Monocled Cobra	Scientific Name: Naja Kaouthia	4
	Family: Elapidae	
Rat Snake	Scientific Name: Ptyas korros	7
	Family: Colubridae	
Reticulated Python	Scientific Name: Malayopython reticulatus	6
	Family: Pythonidae	
Scorpion	Scientific Name: Scorpiones	1,10
	Family: Scorpionidae	
Snake	Scientific Name: Serpentes	1,11
	Family: -	
Wasp	Scientific Name: Vespa cincta	9
	Family: Vespidae	

Table 6. Dangerous animals from

Recommendations for RV (rooftop tent) camping with safety, responsibility, and enjoyment

This section reports on analyzed information from both the in-depth interviews and the pilot study of RV (rooftop tent) camping areas at 11 OHPs in southern Thailand. The main guidelines for RV (rooftop tent) camping put forward include making adequate preparations before travel, having respect for local rules, managing unexpected situations, and enjoying the adventure. Descriptions in that information of adequate preparation regarding how, when and where to go (e.g., selection OHPs catering for RV (rooftop tent) campers), along with deciding what to take (e.g., clothing, medications, food), should provide overall awareness of the safety, responsibility, and enjoyment facets of the chosen destination.

For example, the case studies for RV (rooftop tent) tourism in southern provinces of Thailand indicate that most of the routes are accessible for these vehicles, but some are rough, small, narrow, and steep, meaning that special vehicles would be needed, such as four-wheel drive off-road capable vehicles. In particular, the parking areas at Chumphon and Phangnga provinces were not really suitable for economy or luxury vehicles.

Safetv

Examples emerging from the survey details in Table 5-7 often required practical management of safety aspects, expected or unexpected. Most of these related to handling insect infestations; unexpectedly needing back-up food, lighting and clothing; and negotiating difficult driving challenges. For example, fire ants and mosquitoes were the most frequent dangerous and annoying animals encountered in the case studies. Other potentially dangerous animals that might be found in camping areas include centipedes and geckos, as well as colonies of ants that some tourists would rarely find in daily life (Table 6). Tourists may be excited or scared when showering and changing at the shared toilets and shower rooms,

because these may be a bit dark at night, due to having dim light or no light at all - much less comfortable than in other types of tourism. While travelling, tourists may be excited and impressed by the wonder of amazing tourist places. Choosing to experience these new places may distract tourists from remembering to keep safe, and accidents might occur, such as when driving an RV (rooftop tent) to the deep canal, or on hills with steep slopes. Unfamiliarity with these places may cause danger and feelings of insecurity, especially if there is no-one else around.

Responsibility

Responsible tourists should study the local rules of the OHP on arrival, before parking and settling. These rules will cover actual parking requirements, such as what campers can do while residing in the OHP, which area to park at, which places are available, and any allowance for electricity use, or rules regarding making noise. This also includes finding out any restrictions specific to that OHP, such as the regular days closed to parking areas found in Krabi and Songkhla provinces. As there is as yet very little RV (rooftop tent) tourism in southern Thailand, compared to that in the northern, north-eastern, and central areas of Thailand, most parking operators can allow RV (rooftop tent) campers to choose their own spot. In making this choice, tourists should also avoid dangerous conditions, such as fire ants, parking near noisy main roads with poor privacy, or in steeply sloped areas that are uncomfortable for sleeping in RV (rooftop tent) camping. When there is high tourist demand, parking operators may assign parking places in areas that may be less suitable than when the camper has an open choice of their own parking place. Asking in advance for local rules regarding food preparation, cooking (and cleaning) will show concern and respect for the facility/parking operators. Each OHP will probably have its own ways of managing these rules: for example, not allowing preparation and/or cooking of 'foul-smelling food' (seafood); not allowing setting cooking or campfires directly on the ground; and possibly not allowing cooking at all (instead resorting to restaurant dining). Not all camping food needs to be cooked over a campfire: some parking operators provide kitchen facilities for tourists and others have cooking facilities available for rent. Rules for waste management are important for tourists to consider. Understanding how to separate waste the OHP way—rubbish or recycle; compost or trash—and then applying this knowledge will show respect and proper concerns held by the tourist (Table 1).

Enjoyment

This study found only a small number of the amazing attractions that were located in or near the 11 selected parking areas of the southern Thailand provinces. For example, а beautiful but cold point in viewing Chumphon province (see Figure 5 a), the golden reflection of the canal in Satun province (Figure 5 b), a beautiful beach Nakhon Si in Thammarat province (Figure 5 c), and the limestone mountain ranges in Phangnga province (Figure 5 d) all represent superb natural tourism sites.



Figure 5. Examples of natural attractions in this research study Photographer: Muneenam, 2020 (First author)

CONCLUSION

This research studied representatives of private OHPs in 11 provinces of southern Thailand—Ranong, Phangnga, Phuket, Krabi, Trang, Satun, Chumphon, Surathani, Nakhon Si Thammarat, Phatthalung, and Songkhla—all listed as OHPs suitable for rooftop camping. These were firstly screened from the available information from social media such as website and/or Facebook advertisement, especially with concerns about the possible impacts on society and environment as regards parking spaces, and waste and waste water treatment from RV (rooftop tent) camping activities (showering, cooking, and cleaning). After that, pilot camping study together with observations, and in-depth interviews, suggested suitability for RV (rooftop tent) camping based on: acceptance capacity of RV (rooftop tent) camping, suitable slope, local flora and fauna (birds, small-to-medium animals, and a slight possibility of any poisonous plants or dangerous animals), and the tourist preparation needed. However, access to some of these OHPs may benefit from having an off-road capable vehicle until the trails get improved.

It was found that the OHP at Songkhla province was smallest; while that in Phuket province had the largest parking space. The suitable time for camping in the shade was from 04.00 p.m. to 10.00 a.m. Five of the eleven OHPs were suitable as regards the camping area slope and flatness, while not being too flat and attracting too many campers. But this does not mean they cannot be camped at. Fire ants and mosquitoes were the most frequent dangerous and annoying animals encountered. However, RV (rooftop tent) campers were able to enjoy environments during camping from the choices of canal, mountain, garden, Thai style farm, rice field, forest, beach, and waterfall environments. Although all assessment issues for suggesting the optimal model for RV (rooftop tent) camping from this study were described, the OHPs were not rated for a rank order; but this aspect can be improved in future research studies assessing both the demand and the supply sides.

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