

# LOST IN PARADISE

## The Evolution of SAR in the Hawaiian Islands

by **Danyi Deats & SJ Gold**

SAR in the Hawaiian Islands is rapidly evolving and there are, to date, three organised teams: Maui SAR (MSAR), Oahu SAR (OSAR) and Kauai SAR (KSAR) plus the Search Technology Advisory Team (STAT). Untrained volunteers accomplished the most technologically sophisticated<sup>1</sup> search and rescue in Maui, Hawaii. This made world news<sup>2</sup> when a 35-year-old female went missing and the fire department cancelled its portion of the search<sup>3</sup> after 72 hours. Over 1,000 volunteers then dropped everything to keep searching – finding her alive 17 days later in May, 2019. As a direct result of that unprecedented operation, experts from around the country gathered – Beachfront, amidst the gorgeous scenery of the lush green Kualoa Ranch (home of Jurassic Park) in Oahu by creating Hawaii's first Search And Rescue Convention<sup>4</sup> – *Hawaii SAR CON*<sup>5</sup>

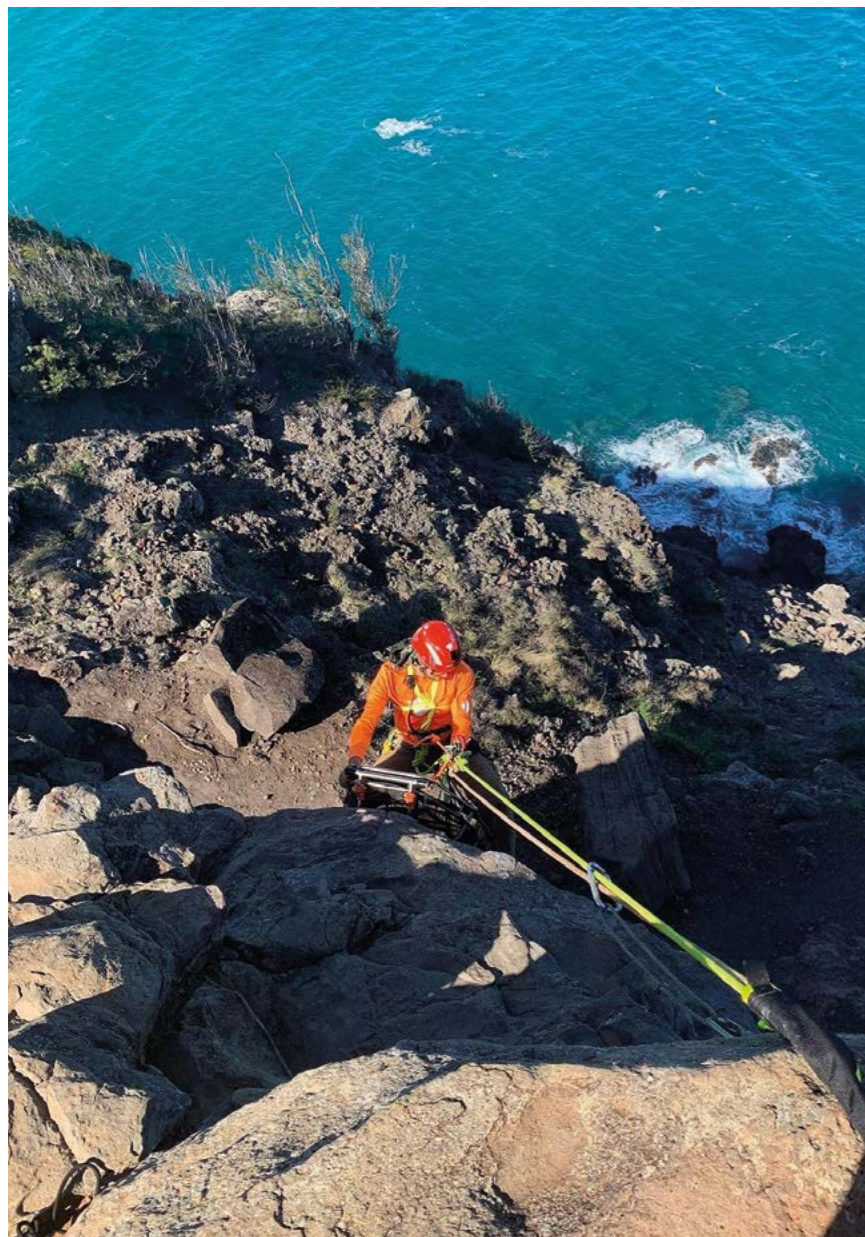
Tourists are drawn from all around the world to experience these local traditions, beautiful beaches and the lush tropical paradise. However, the islands pose a severe threat<sup>6</sup> to adventurers and wanderers – both local and tourist – who brave its thick forests and deep blue oceans full of hidden dangers,<sup>7</sup> such as treacherous terrain, flash floods, sharks and rip tides. Based on population, Hawaii ranks second in the nation for missing persons (tied with Oklahoma).<sup>8</sup> Children and adults, men and women, often disappear and are never found. According to the *National Database for Missing and Unidentified Persons (NAMUS)*,<sup>9</sup> there are approximately 600,000 people declared missing in the United States every year. The state of Hawaii currently has 233 of the 1.42 million Hawaiian residents missing which calculates to approximately 10 out of every 60,000. *NAMUS* shows data for all missing persons' cases which may include wilderness, ocean, run-aways, human trafficking and other criminal activity.<sup>10</sup>

In an effort to create awareness and to decrease the high statistics, Rosemarie Johnson, who was a volunteer in the 2019 Maui search (nicknamed 'Number Five'), co-produced the *Hawaii SAR CON* and *Community Safety Wilderness Survival* event. Johnson, an engineer and strategist for over 25 years, explained to those in attendance that “We live in a state that attracts over 10,000,000 tourists annually, spending over \$17 billion in 2019 and \$13 billion in 2021. This creates \$1 to 2 billion per year in tax revenue from that sector; yet, there are no prevention plans and an imprudent amount of public service announcements in place for those tourists. This results in a great burden being placed on the already lacking resources and manpower of both the police and fire departments on the islands.

“as a human being and a part of society, participating in search and rescue is the most meaningful thing you can do. It is ‘pono’ – doing what’s right because it is the right thing to do – serving your community which helps find people, save lives and bring families back together.”

MAIN PIC: One wrong step and paradise can become a living hell. SAR operations are sometimes not much better.





Above. Left & Opposite: Having an understanding and the skill set for high angle rescues is essential for search and rescue in Hawaii. Team members of OSAR are shown here off the cliffs on the eastern side of Oahu. Pics OSAR

Hawaii SAR CON Q&A special guest, Rick Stanton, one of the world's most accomplished cave-divers (recently portrayed in Oscar winners: 'Ron Howard's -Thirteen Lives' and 'Jimmy Chin's – The Rescue' about the Tham Luang cave rescue), also attested to the fact that "Resources and training are critical. Rescuers need to gain knowledge of proper skills so that they don't put the operation, themselves and others in danger." Rick is also a retired firefighter from the UK and attributed the success of the 2018 rescue to the fact that "the operation was fully funded by the Thai government."

Agreeing with Stanton, Johnson said, "this is far from the case in Hawaii. Without strategic, scalable interventions which include proper funding for prevention and training, we risk irreparable harm to the very resources that make Hawaii so exceptional."

It was clear that she gained a wealth of knowledge collaborating with all the experts from around the country to make this event happen and had become an authority on these problems and solutions in Hawaii.

John Eller, the father of the hiker found in May 2019, retired from the technology sector. Motivated by his daughter's successful rescue, he saw the need to augment the capabilities to aid search and rescue in Hawaii. Mr. Eller founded the non-profit *Search Technology Advisory Team (STAT Hawaii)* in 2019 as his way to pay it forward to the community and to help other families find their loved ones.







“On May 8th, 2019, my daughter went for a run in the Makawao forest on Maui. When trying to get back, she lost her way, fractured her leg in the process and was stuck for the next 17 days. This became the catalyst for everything STAT has done since,” said Mr. Eller. STAT’s mission is to aid other Search And Rescue (SAR) efforts in Hawaii by working with SAR teams as well as with police and fire to help improve outcomes. STAT now provides tools and technology to assist in SAR efforts in Hawaii and across the country. STAT also engages community volunteers to pick up where the government agencies leave off.

“My wife and I were on vacation and we got notified about two days after our daughter went missing,” Mr. Eller recounted. He then made contact with the Maui Police and Fire Departments, which had been searching for two to three days at that point and due to policy were discontinuing their search.

Eller continued, stating that, “Fortunately, we had good media coverage of the search which brought in many volunteers; some days as many as 150.” He then went on to describe that there were struggles and the searchers faced dwindling hope, “but

the community pulled through and we found my daughter.”

Despite the unprecedented 2019 rescue, the amount of missing persons continues to grow with increased incidents of human trafficking on the rise. Most people, if not located in the first 48 hours, are never found. Does this sound unbelievable? Unfortunately, due to a lack of resources, it is true. In Hawaii, authorities only search for 72 hours maximum. Finding people requires government funding as search and rescue missions can cost over \$10,000 for just one day of searching. This goes to show the urgent need for allocation of additional SAR funding<sup>11</sup> and operational support. For example, the Thai Tham Luang cave rescue cost about \$9 million U.S. dollars<sup>12</sup>, not including all of the volunteer support.

Chris Berquist, a *Hawaii SAR CON* speaker and co-founder of STAT was the novice incident commander of the 2019 historic amateur volunteer search. When asked about advice to give to a hiker, Berquist spoke with certainty: “I’d guess that this is probably a question I’ve been asked thousands of times, which is why STAT has branded and supplies a ‘Get Found Kit.’ The kit includes a small instruction card, Mylar blanket, glow stick, whistle and lighter inside a plastic bag that can collect rainwater.”



Above/Opp Thick lush Hawaiian terrain is spectacular to look at though creates many challenges when searching as it is literally like trying to find a needle in a haystack. pics by Nimai Wong  
Below: A person can easily take refuge and sustain with rainwater and plants in some parts of the Hawaiian islands for a long time – thus extended searches are required. pic by OSAR  
Inset Opposite: The STAT ‘Get Found Kit’. STAT is currently seeking a partner for U.S. distribution to increase the odds of finding those lost in the wilderness. pic by PONO Consulting







Above: Enthusiastic participants in the last Hawaii SAR CON show their excitement about coming together for this historic event. Pic by Hawaii SAR CON  
Below: Chris Berquist, John Eller, Rosemarie Johnson, Les Stroud



Berquist did not stop there; he also recommended keeping essentials for hydration, nourishment, warmth, first aid and visibility, informing others of hiking plans and being prepared in case anything were to happen.

He continued rattling off the following list:

- Take a first aid class so that you can understand how to stabilize yourself if you have a bad twist or fall.
- Have a whistle on you because you can only scream for so long.
- Have some source of light with you other than your cell phone.
- Have appropriate clothing for when the temperature changes.
- Always let somebody know where you are supposed to be and when you are supposed to return.
- Do not trespass or go off trail because help will be a lot less accessible.

If you get lost:

- Find an open location.
- Make a giant SOS sign.
- Make noise using a whistle when it gets quiet.
- Create visible light or smoke with a fire.

World renowned wilderness survival expert, Les Stroud – 'Survivorman' (who was featured at *Hawaii SAR CON*) agreed, recommending: "Always take a kit with you. Preparation is key! It is every individual's responsibility and duty to be prepared when venturing out into the wild. The best chance of surviving is achieved before getting lost. Assumptions, ego and foolishness are not trustworthy guides."



Oahu SAR has a robust team and conducts trainings to certify new recruits on a regular basis. Shown here are some new recruits in training searching through mother nature's treacherous obstacle course. Pics by Oahu Search and Rescue







Main Pic: Hawaii's plentiful waterfalls are a magnet to tourists and adventurers but also the scenes of rescues for teams the world over. Pic by Robert Bridges IG@rjwandering

Above: Former special operations airborne ranger, third ranger battalion, seventy fifth rangers regiment, owner of Sting J Maui and Island Style Diving, Javier Cantellops, is shown here rappelling down a massive waterfall and vast foliage on 8th of the 17 day historic Maui search. Cantellops stated "I could feel the police and fire wind down on day 3 as their policy only allows 72 hours and that's what really motivated me, like, I've got to take over this whole thing. I have got to stay here, this isn't gonna be easy, this isn't gonna be resolved by [the Fire Dept]. They've got other things going on and they are about to wrap up. I remember feeling so frustrated that we couldn't find her and on day 16 everyone was in despair. I told John Eller that I just felt that every experience, class and certification has brought me here to find his daughter. And then, the miracle happened! We were in the helicopter, looked down and she just materialized! I have never felt such joy and overwhelming adrenaline in a single moment in my entire life."



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# WSAR Q&A

Hawaii SAR's spokesperson Rosemarie Johnson helps answer a WSAR third degree.....

**WSAR:** Why a SAR conference at this early stage in the life of HAWAII SAR?

**HSAR:** The purpose of the event was to create a platform to improve relationships and communications and bring together all of the state agencies and SAR teams. There is no state SAR coordinator who would normally track data, establish proper protocol and answer questions from the public or media. In Hawaii, every county island works independent of the other and there is a gross lack of resources for equipment, training and technology.

**WSAR:** What are the skills and equipment specific the SAR teams provide with regards to standard rope rescue systems, motorised vehicles, UAVs/water rescue drones, water rescue assets, etc?

**HSAR:** Hawaii's landscape presents unique challenges with its very rough and dangerous terrain so the use of technology helps keep people out of high-risk areas, and clear areas much more quickly. \*Search Technology Advisory Team (STAT Hawaii) uses the "STAT METHOD" which combines technology, a proven methodology, volunteerism and education to decrease the statistics of Missing Persons in the wilderness. STAT is called upon at the families request, takes over where local authorities leave off and has a full array of SAR technology including:

- DJI Matrice 300 RTK – Most advanced drone available It is widely acknowledged that drones are the future of search and rescue.
- Quad camera, IR (FLIR), and Laser camera on drone H20T
- Image scanning software to automatically scan huge volumes of drone imagery to identify possible missing person
- Off grid communications and satellite searcher trackers
- Search planning and management SARTOPO mapping software
- Garmin Mini radios , GPS trackers, med kits, lights, cam lights, hiking sticks, etc.

**WSAR:** Do volcanoes require certain safety equipment/precautions or do the authorities limit your access during eruption/lava events?

**HSAR:** SAR teams have no access during eruption/lava events. Civil Air Patrol take the obvious precautions of not to fly in/near lava/smoke plumes. Some of the debris (Pele's hair) is too small to see in flight and can destroy engines.

Authorities which have access to eruption/lava events are USGS (U.S. Geological Survey) and National Park Service, US Coast Guard, Civil Air Patrol, and County Police. Usually the USGS (U.S. Geological Survey) and National Park Service will set up a temporary flight restriction and it's up to them on what aircraft are allowed to enter. On the ground, it could be multiple jurisdictions depending on

where the flow is. County Police may try to control access along with National Guard, but it can be a challenge depending on size.

**Civil Air Patrol** can be called upon to deploy manned and unmanned aircraft, ground teams, national radar analysis, and cell phone forensics teams which result in over 90% of finds in the US. Their ground team; assess and secure the scene, renders aid to survivors and prepare survivors for evacuation, do not disturb anything at the site except as necessary to render aid to survivors verify the identity of the aircraft, person, etc., advise the IC of the situation and request appropriate authorities be notified and retain aircraft or other resources in the area until certain they are not needed.

**WSAR:** What is the inter-Island structure of SAR in Hawaii and is there any standardised equipment PPE for certain teams/the entire Hawaiian SAR community or is it all approved personal gear etc.

**HSAR:** Most PPE for SAR teams is personal gear as they are all volunteers. Some grants have allowed for some teams to invest in standard equipment.

Each island/county Search And Rescue Team works independently of each other:

- **Maui Search And Rescue (MSAR)** is a volunteer organization dedicated to providing expert search & rescue assistance and community outreach education. They respond to call-outs from government agencies and family members of missing persons.
- **Oahu Search And Rescue (OSAR)** certifies to standards established by National Association for Search and Rescue (NASAR) and Mountain Rescue Association (MRA). OSAR provides standard and advanced rope rescue systems training and is dedicated to preventative education on Oahu.
- **Kauai Search And Rescue (KSAR)** specializes in canine rescue and certifies to standards established by organizations such as the National Association for Search and Rescue (NASAR). People are trained in visual tracking, compass, topographical map reading, first aid and CPR. The dogs are obedience-trained, and are trained to track based on either human scent discrimination or air scenting. Optionally, dog teams may be trained for human remains detection. KSAR only responds to callouts by the Kauai Police Department, Kauai Fire Department, and the Department of Land and Natural Resources. Once officially activated they work closely under their direction.

A future, more detailed article on HAWAII SAR will chart the progression of the fledgling service:

- Why data is required for SAR
- Why technology is important to SAR
- Creating a more robust Hawaii SAR
- Why do so many people go missing in Hawaii
- Hawaii Search and Rescue Resources
- Essentials of training in SAR

Stroud also stated that, "as a human being and a part of society, participating in search and rescue is the most meaningful thing you can do. It is 'pono' (Hawaiian word for doing what's right because it is the right thing to do) and serving your community which helps find people, save lives and bring families back together."

On the last day of the event, Number Five stated, "It's been incredible bringing all of the state agencies together for the first time. *Hawaii SAR CON* has created a platform – to build a foundation of relationships and communications – where agencies can work together more effectively and efficiently to save lives."<sup>13</sup> Speaking through tears from the excitement at accomplishing this historic event, Number Five also said, "It was all very personal for me. I participated in a search three years ago, not aware or understanding the agency resource limitations at that time. And I thought to myself, 'What if that were me? Who would find me? Who would even look?' Hawaii is one of the few states in the nation with no State SAR Coordinator. There is a major lack of funded manpower for wilderness searches in Hawaii, so volunteers are essential. It is also one of few states that does not fund the training, tools or technology for the volunteer searchers, which is why *STAT* has proven invaluable to the Hawaiian volunteer search groups."

In the end, the message was clear that in harmony with Hawaiian culture, be informed and practice pono<sup>14</sup> through the new **5Ps: Proper Preparation Promotes** (safety), **Prevents** (injury) and **Protects** (yourself, others and the aina<sup>15</sup>).

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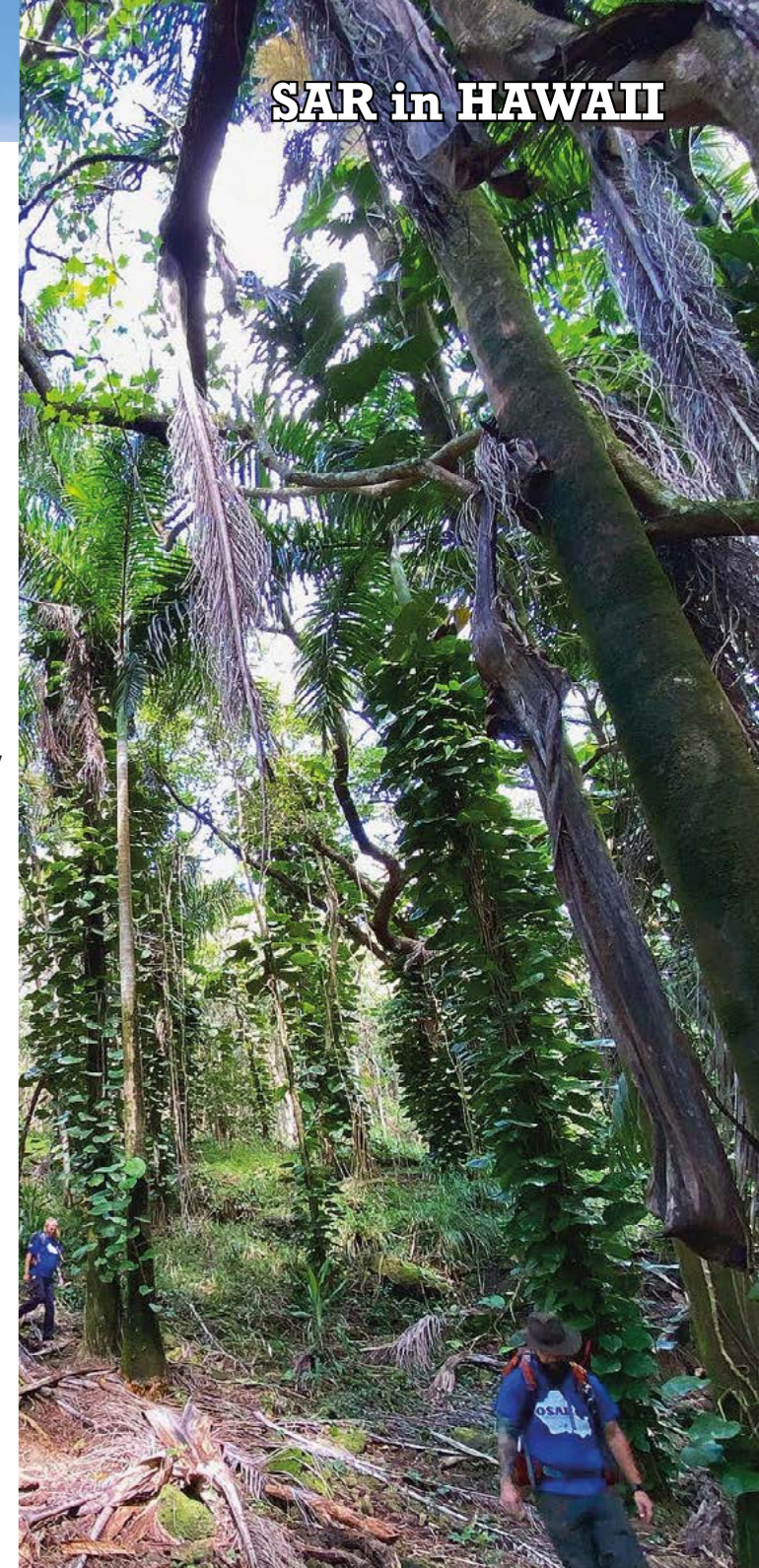
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