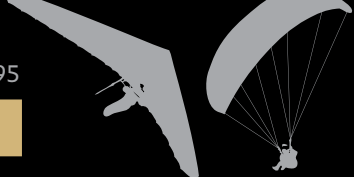


JULY / AUGUST 2020 VOLUME 50 #4 \$6.95

USHPA PILOT

UNITED STATES HANG GLIDING AND PARAGLIDING ASSOCIATION



Hang Gliding in China + Wright and Lilienthal + Wings of Kilimanjaro



DELTA⁴

A QUANTUM LEAP

The Delta 4 offers the largest performance gain in the history of the series. With the strongest profile structure yet, it retains all of the comfort and ease of use that has made the Delta the best-selling sport class wing of all time.

New 3/2-Line Layout

New Profile

G-String Leading Edge

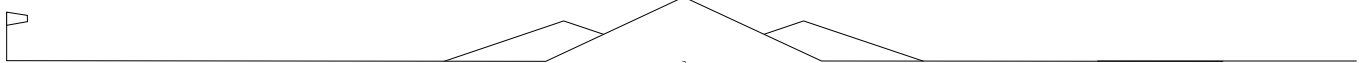
New Internal Construction

New Active Control Riser System

FLYOZONE.COM

Pilot: Horacio Llorens on El Hierro Island, Spain.
Photo: Ivaylo Donchev





Martin Palmaz, Executive Director
executivedirector@ushpa.org

Beth Van Eaton, Operations Manager
office@ushpa.org

Erika Klein, Communications Manager
communications@ushpa.org

Chris Webster, Information Services Manager
tech@ushpa.org

Galen Anderson, Membership Coordinator
membership@ushpa.org

OFFICERS

Kate West, Vice President & Acting President
vicepresident@ushpa.org | president@ushpa.org

Ken Andrews, Secretary
secretary@ushpa.org

Mark Forbes, Treasurer
treasurer@ushpa.org

For change of address or other USHPA business
+1 (719) 632-8300 info@ushpa.org

BOARD OF DIRECTORS

Terms Ending in 2020

Ken Andrews (region 3)

Alan Crouse (region 3)

Mark Forbes (region 1)

Kate West (region 4)

Mike Holmes (region 5)

Doyle Johnson (region 1)

Daniel Lukaszewicz (region 4)

Steve Rodrigues (region 2)

Matt Taber (region 4)

Paul Voight (region 5)

Terms Ending in 2021

Jugdeep Aggarwal (region 2)

Steve Pearson (region 3)

Kimberly Phinney (region 1)

Sara Weaver (region 3)

REGION 1 NORTHWEST

[AK·HI·IA·ID·MN·MT·ND·NE·OR·SD·WA·WY]

REGION 2 CENTRAL WEST

[Northern CA·NV·UT]

REGION 3 SOUTHWEST

[Southern CA·AZ·CO·NM]

REGION 4 SOUTHEAST

[AL·AR·DC·FL·GA·KS·KY·LA·MO·MS·NC·OK·SC·TN·TX·WV·VA]

REGION 5 NORTHEAST & INTERNATIONAL

[CT·DE·IL·IN·MA·MD·ME·MI·NH·NY·NJ·OH·PA·RI·VT·WI]



The United States Hang Gliding and Paragliding Association Inc. (USHPA) is an air sports organization affiliated with the National Aeronautic Association (NAA), which is the official representative of the Fédération Aéronautique Internationale (FAI), of the world governing body for sport aviation. The NAA, which represents the United States at FAI meetings, has delegated to the USHPA supervision of FAI-related hang gliding and paragliding activities such as record attempts and competition sanctions. The United States Hang Gliding and Paragliding Association, a division of the National Aeronautic Association, is a representative of the Fédération Aéronautique Internationale in the United States.



HANG GLIDING AND PARAGLIDING ARE INHERENTLY DANGEROUS ACTIVITIES

USHPA recommends pilots complete a pilot training program under the direct supervision of a USHPA-certified instructor, using safe equipment suitable for your level of experience. Many of the articles and photographs in the magazine depict advanced maneuvers being performed by experienced, or expert, pilots. These maneuvers should not be attempted without the prerequisite instruction and experience.

POSTMASTER USHPA Pilot ISSN 1543-5989 (USPS 17970) is published bimonthly by the United States Hang Gliding and Paragliding Association, Inc., 1685 W. Uintah St., Colorado Springs, CO, 80904 Phone: (719) 632-8300 Fax: (719) 632-6417 Periodicals Postage Paid in Colorado Springs and additional mailing offices. Send change of address to: USHPA, PO Box 1330, Colorado Springs, CO, 80901-1330. Canadian Return Address: DP Global Mail, 4960-2 Walker Road, Windsor, ON N9A 6J3.

cover photo by **ALEX COLBY**



Following Marc Collins across the Kahana Bay to start a surreal sunrise cross country mission.

USHPA PILOT

Martin Palmaz, Publisher
executivedirector@ushpa.org

Liz Dengler, Editor
editor@ushpa.org

Kristen Arendt, Copy Editor

Erika Klein, Copy Editor
copy@ushpa.org

Greg Gillam, Art Director
art.director@ushpa.org

Beth Van Eaton, Advertising
advertising@ushpa.org

STAFF WRITERS

Annette O'Neil

Dennis Pagen

Jeff Shapiro

PHOTOGRAPHERS

Ben White

Audray Luck

SUBMISSIONS from our members and readers are welcome. All articles, artwork, photographs as well as ideas for articles, artwork and photographs are submitted pursuant to and are subject to the USHPA Contributor's Agreement, a copy of which can be obtained from the USHPA by emailing the editor at editor@ushpa.org or online at www.ushpa.org. We are always looking for great articles, photography and news. Your contributions are appreciated.

ADVERTISING is subject to the USHPA Advertising Policy, a copy of which may be obtained from the USHPA by emailing advertising@ushpa.org.

COPYRIGHT ©2020 US HANG GLIDING & PARAGLIDING ASSOC., INC. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without prior written permission of USHPA.

Flight Plan [Editor > **LIZ DENGLER**]

This flying season got off to a rough start. As a result of the COVID-19 pandemic, we, as a society and flying community, had to find new ways to navigate the world. Like many others, after I was laid off from my full-time job, I was faced with an abundance of time and, perhaps, just an iota of stress; so I began investigating how to occupy myself. And I wasn't alone! As states began relaxing COVID-19 restrictions, many pilots started chasing the weather and making the most of the late start to the flying season. Reports of big cross country and record-breaking flights kept flooding in!

Though I'm not out breaking records, I used my new found time to focus on some long-standing goals of my own including spending more hours in the sky, becoming a better mentor, and learning more technical skills such as trimming paragliders and packing reserves. As the year progresses, I look forward to setting new goals for myself. I hope you join me!

I'd offer three key tips for goal setting: 1) be honest and realistic with what you can accomplish in a given season, 2) if it's a flight-oriented goal, pick the right days to attempt it (don't push for a goal and put yourself in danger), and 3) try not to let the drive of achieving a goal interfere with the enjoyment (or safety) of your flying. Start with small, attainable goals that match your current skill level. For instance, if you're a newly-minted P2/H2 as of spring 2020, your first goal shouldn't be to fly 100 km. Instead, pick a shorter distance goal or another task entirely. Goals don't always have to center on setting a personal distance record. You can set a goal to fly your home site's task, fly a new site, learn how to set a task in your instrument, or read a book about flying or weather every two months, just to name a few options. For beginner pilots, working toward small goals is also a way to connect with your local flying community. Other pilots are a great resource for help with learning a new skill or for a site intro.

If you're a more advanced pilot and your goal is to push your flight distance, know that the farther and longer you fly, the harder it gets to break your personal bests. If distance is your main goal, great! But keep in mind that you can also set a number of smaller goals to work on during stable days when that lofty challenge isn't possible. Having a handful of goals to work on not only allows you to progress your skills as a pilot in various ways, but also reminds you to keep a balanced perspective on your flying. You've heard of destinationitis, right? Don't let the drive of achieving a goal take the fun out of flying!

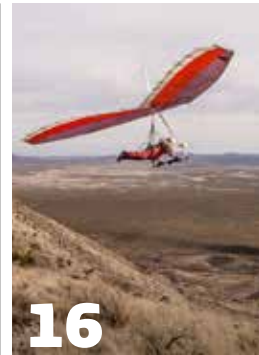
Summer is a great time to work on your skillset. You don't always need to be chasing an epic goal to make progress. Setting a few small and achievable goals will ensure you have options regardless of what the flying day yields. If you aren't sure where to start with goal setting, chat with a friend or mentor to spark some ideas. And remember, the ultimate goal is to have a safe and enjoyable flight. So get out, have fun, and enjoy the air!



Liz

2020 **July/August** CONTENTS

- 5 FLIGHT PLAN
- 8 LAUNCHING
- 10 AIRMAIL
- 12 FINDING LIFT
- 15 ARC
- 62 CALENDAR
- 63 CLASSIFIED
- 65 RATINGS
- 66 FINAL



20 MAKING FLYING HISTORY
Wright and Lilienthal gliders fly side by side.
by **MARKUS RAFFEL** and **PAUL GLENSHAW**

24 FLYING JAPAN
Traveling in the time of COVID-19.
by **BILL NIKOLAI**

40 HANG GLIDING in CHINA
Some dreams do come true.
by **PETE LEHMANN**

48 WINGS OF KILIMANJARO
A father and son and the experience of a lifetime.
by **BEN WHITE**



16 SITES

Southern New Mexico
Sampling the offerings of southern New Mexico.
by **ROBIN HASTINGS**

30 FEATURE

Far-Out Fledglings
A rookie's recap of a lifetime experience.
by **LINDSEY RIPA**

36 COMPETITION

Pan-American Cup 2020
Paragliding Accuracy League kicks off in Ecuador & Colombia.
by **PEDRO TIRADO**

56 GATHERINGS

Ice Road Flyers
Pilots gather to fly in the land of 10,000 frozen lakes.
by **DAVID DYBSAND**

58 FLIGHT LOG

Winter Flying Partner
A little lift from a friend.
by **JIM GIBSON**

60 WEATHER

Convergence Lift
Learning the flow of your local sites.
by **HONZA REJMANEK**

Photo: Jerome Maupoint

TRAVEL LIGHT, FLY FAR

The Calypso is a light easy intermediate ("low B") wing for beginning and leisure pilots who want a confidence-inspiring wing that is easy to travel and fly with, whilst still offering great XC possibilities.

The Calypso has been developed from the ground up. Handling is reassuring but fun — a little more dynamic than a typical glider in its class, but without surprises.

EN B // 5 sizes // 55-120 kg

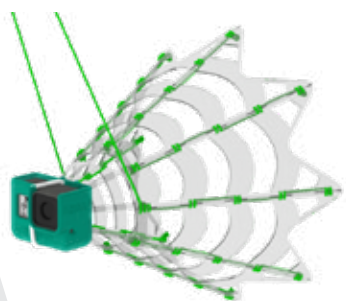
Super Fly Paragliding
801.255.9595
service@superflyinc.com
superflyinc.com



Calypso

www.gingliders.com

Launching [Latest Gear]



SKYBEAN CHASECAM The Skybean ChaseCam is designed to record awesome footage of your flights from third person view. It's not a unique product anymore, but it is still an original one—the first of a kind using “shuttlecock” shape. ChaseCam for GoPro can hold any GoPro Hero 3 to 8 cameras*. You don't need to use adhesive mount and risk line tangle between base plate and camera body. The camera is protected inside durable casing. The bungee rope is set up for quick adjustments in length and it is suitable for tandem wings as well as speed glides. Compatible cameras: Hero 3 White, Hero 3+ Silver, Hero 3+ Black, Hero 4 Session, Hero 4 Silver, Hero 4 Black, Hero 5 Session, Hero 5 Black, Hero 6 Black, Hero 7 Black, Hero 8 Black.

XC TRACER MAXX Whether you're a beginner or a pro, with the XC Tracer Maxx you fly intuitively like never before. Screens are reduced to the essentials to allow intuitive flying. Icons are used instead of text for effortless interpretation (you don't have to read a manual). Sensitive vario technology with no time lag. The vario has a built-in lithium-polymer battery, which when fully charged has at least 60 hours of continuous operation, including data transmission via BLE and recording of IGC and KML files. The battery can be recharged with the included USB-C cable. The XC Tracer Maxx weighs only 120 grams, so it is easy to take with you on hike-and-fly adventures. For more information visit eagleparagliding.com



CHARLY LOOP HELMET This air-sport specific EN-966 certified helmet is available in five sizes from XS-XL. It comes in blue, black, red, and white, and features a removable grey, mirror, salmon, or yellow visor. The Loop also has an antibacterial inner lining that is easily cleaned and features optional ear pads. Charly Helmets are available through Super Fly—www.superflyinc.com, service@superflyinc.com, and 801-255-9595.

YETI TANDEM 3 With two sizes that accommodate a weight range of 90-220 kg this EN-A certified tandem glider is suitable for any tandem setup. At only 4.8 kg for the smaller size (5.4kg for the larger) this ultralight tandem glider is suitable for hike-and-fly adventures and flights with family and friends. This glider offers a stable and comfortable flying experience—even in strong conditions—without sacrificing performance. If you're looking to tackle new hike-and-fly adventures without leaving your friends behind, or if you just want a light tandem for traveling, the Yeti Tandem 3 should be your next wing. It is available through Super Fly—www.superflyinc.com, service@superflyinc.com, and 801-255-9595.



NOVA ITUS The all-new Nova Itus is a full-feature, lightweight (2.7 kg for the medium) reversible harness with a honeycomb seat board, a SAS-TEC back protector, and a three-chamber pre-filled airbag. Additional safety features include an optimized reserve compartment and the color-coded Clicksafe closing system. It is supremely adaptable as the backpack can be unzipped from the harness (it has pockets for a water bladder, hiking poles, a jacket, and other small items) and comes in sizes S-L. The Itus is available through Super Fly—www.superflyinc.com, service@superflyinc.com, and 801-255-9595.



CHARLY NO LIMIT HELMET The air-sport specific EN-966 certified helmet is available in five sizes from XS-XL. It comes in blue, black, red, and white. It comes with a clear visor (100% UV) but visors are available in tinted, dark gray, clear, and mirrored. It is constructed of aramid fiber. The chin guard has almost no blind spots and with the visor open it is easy to talk, drink, etc. It also has a skin-friendly antibacterial lining. The helmet weighs 650 grams (visor is 114 grams) and is available through Super Fly—www.superflyinc.com, service@superflyinc.com, and 801-255-9595.



ADVANCE COCKPIT CARRY The new flight deck by Advance is an easy-to-remove cockpit that hangs on the main carabiners. There is a deceptive amount of storage given its sleek design, with a roomy main pocket, divide for easy organization, an inside zip pocket excellent for keys, cash, etc., and an extra pocket with a cable exit that is roomy enough for a powerbank. It can even hold a 7-liter ballast bag. The large instrument panel (with sun guard) has velcro attachment and a neoprene protection cover that is easily stowable when not in use. At just 440 grams, the Cockpit CARRY by Advance is a worthy update to anyone's system for just \$130. Available through Super Fly—www.superflyinc.com, service@superflyinc.com, and 801-255-9595.

GIN VERSO 3 The new, lighter redesign of the Verso satisfies all the desires of the hike-and-fly pilot. The lightweight reversible airbag harness is a perfect companion for hike-and-fly pilots but is also suitable for leisure flying and cross country adventures. The new Verso 3 is 600g lighter than previous models (ranging 3.4 to 4.4 kg), the redesigned rescue compartment under seat makes for faster reserve deployment, and the airbag inflates easier and quicker than previous models (at take-off, the airbag is already 70% inflated). With a variety of sizes ranging from XS to XL, the Verso 3 is the perfect option for any pilot. Reach out to Super Fly for more information—www.superflyinc.com, service@superflyinc.com, and 801-255-9595.



ADVANCE IMPRESS 4 The all-new Impress 4 is your Accessible Throne in the sky. This cross-country style harness is intended for anyone from the leisure cross-country pilot through competition level pilots. It comes in sizes S-L (6.4-6.6 kg). This aerodynamic harness is one of the first with a rear spoiler that is also easily packable in any standard paragliding rucksack. The removable seatboard can cut down on weight and increase packability when the situation demands. Despite its packability, the Impress 4 is loaded with safety features including foam and SAS-TEC protection, two reserve compartments, and an anti G-chute pocket. With additional features such as a windshield, detachable cockpit, hook knife, and radio pocket, the Impress 4 is fully-loaded and ready for any XC adventure you can throw at it. Reach out to Super Fly for more information—www.superflyinc.com, service@superflyinc.com, and 801-255-9595.



SOFT SHACKLE Up to eight times lighter than a traditional metal mallion, the Soft Shackle by GIN is the perfect replacement. Useful for webbing-to-webbing connections (great for attaching your rescue to your Y-bridle), the soft links provide equivalent strength to their metal counterparts, have a locking system to prevent slipping under load, and are much easier to undo without tools. Check them out at Super Fly (www.superflyinc.com, service@superflyinc.com, and 801-255-9595) to update your setup.

2020 USHPA Awards Call for Nominations

Make your nomination at ushpa.org/page/award-nomination-form
Nominations are due **October 1**.

PRESIDENTIAL CITATION USHPA's highest award for a member or non-member who has made significant contributions.

ROB KELLS MEMORIAL AWARD Pilot, group, chapter, or entity with continuous service over a period of 15 years or more.

EXCEPTIONAL SERVICE AWARD Recognizes outstanding service to the association by any member or non-member.

NAA SAFETY AWARD Presented by NAA to an individual, recommended by USHPA, who has contributed to safety promotion.

FAI HANG GLIDING DIPLOMA For an individual who made outstanding contributions to the development of hang gliding or paragliding by his or her initiative, work, or leadership in flight achievement.

FAI PEPE LOPES MEDAL FAI Hang Gliding and Paragliding Commission (CIVL) awards this medal for outstanding contributions to sportsmanship or international understanding.

CHAPTER OF THE YEAR Recognizes a USHPA chapter/club that has conducted successful programs that reflect positively on hang gliding and/or paragliding.

NEWSLETTER/WEBSITE OF THE YEAR Recognizes an outstanding club publication (printed or web-based).

INSTRUCTOR OF THE YEAR AWARD Nominations should include letters of support from three students and the local Regional Director.

SPECIAL CONTRIBUTION For any number of non-members and organizations that have done exceptional volunteer work.

COMMENDATIONS For any number of outstanding USHPA member volunteers.

BETTINA GRAY AWARD Recognizes a photographer in consideration of aesthetics, originality, and a positive portrayal of hang gliding or paragliding.

BEST PROMOTIONAL FILM Recognizes a videographer in consideration of aesthetics, originality, and a positive portrayal of hang gliding or paragliding.



WOODY VALLEY GTO LIGHT 2 POD

HARNES The new GTO LIGHT 2 is even lighter than its predecessor with its inflatable back protector. The inflatable back protector fits in the previous model as well. It makes the harness lighter and smaller in your rucksack. It has more passive safety and versatility thanks to the adjustable ABS, detachable windshield, and sturdier elastic materials. The harness comes with Lightshield upper-back protector, and one reserve housing with a right-hand side handle. The cockpit is roomy enough to fit an anti-G, and there is plenty of storage space, both in the back and under the seat (where you can put ballast). Ratcheting Pulleys can also be added. For more information visit www.eagleparagliding.com

WOODY GTO LIGHT 1 & 2 INFLATABLE BACK PROTECTION

The new inflatable back protection succeeds in making your GTO Light 1 or 2 lighter, and gives your rucksack more space inside, making it more compact outside. It only weighs 335 grams and can be easily inflated using its strategic inflation tube located along the shoulder strap. You can easily zip the inflatable protection into both the GTO Light 2, and its predecessor GTO Light 1. **THIS ITEM IS ONE SIZE FITS ALL.** For more information visit www.eagleparagliding.com



GARMIN INREACH® MINI The palm-size Garmin inReach Mini satellite communicator provides off-the-grid contact. At only 3.5 oz, it has 2-way texting, tracking and SOS capabilities. Exchange texts while beyond cellular range with any cell phone. The Iridium satellite network tracks within 5 meters. Share your journey with others, and trigger an interactive SOS to the 24/7 search and rescue in case of an emergency. Pair with mobile devices, access to topographic maps and U.S. NOAA charts, and get the optional inReach weather forecast service. The rechargeable lithium battery provides up to 50 hrs. of battery life in 10 min. tracking mode. For more information visit www.eagleparagliding.com

EAGLE BUFF Protect yourself from the sun, dust, and any other crazy particles in the air by wearing an Eagle Buff. Made from UV protectant fabric this is a perfect accessory to any flight or daily activity. For more information visit www.eagleparagliding.com



Airmail [Letters to the Editor]

Dear Mr. Pagen, I read your article on spins in the current issue of the USHPA magazine (Volume 50, Issue 3, May/June 2020, pp. 56-58) with interest. In this article, you write (on page 58) about checking an incipient spin by reducing the inside brake while maintaining weight shift:

"If you feel a sudden reduction in brake force and/or a rotation of the wing in the direction of the turn, expect an incipient spin and immediately reduce the inside brake while maintaining weight shift."

This is puzzling to me. I would have thought it advantageous to shift the weight to the outside; or are you suggesting that intending to maintain a "flat" turn, the weight already is on the outside wing?

Your clarification would be greatly appreciated.

- Sincerely, Clem Grossskinsky

Thanks for your question.

In all the spins you will see, in any aircraft, the maneuver is a rotation about a vertical axis, and net forward motion is stopped. In other words, the aircraft is descending straight down in a continuous 360. With a coordinated turn, when you reduce the bank angle (with a brake or weight-shift control on the outside wing), the glider will straighten out its curving path and maintain airflow over both wings. However, in a steady spin with the inside wing stalled, the glider will not open up the curving path with a control intending to reduce the bank because the high amount of drag on the inside wing keeps retarding that wing, and the spin continues. In fact, shifting weight to the outside in a spin may increase the spin rate (due to adverse yaw) and thereby increase the chance of sudden vertigo.

Imagine that you could reduce all bank angle with an unusually powerful weight shift. You would find the glider has no forward airspeed, and

the whole wing would suddenly stall with typical consequences. In the real world, when you weight shift to the outside in a spin, you may be able to flatten the bank somewhat, but you will increase the area of the inside wing that is stalled.

For a similar reason, it is important not to pull the outside brake in an attempt to stop the rotation. Videos of pilots doing this show the glider suddenly banking to the opposite side and spinning on that side. If a pilot were to attempt to maintain a flat turn by keeping the weight on the outside of the turn, it would require adding inside brake control to maintain the turn, which is a good way to produce a spin. Don't do it.

I also spoke with Dave Prentice for his insight. He is one of several instructors who teach SIV courses with spins as part of their curriculum. When he has students perform a spin, they use specific controls to

initiate the stall/spin which typically lead to a partial collapse of the inside wing and a cycling of the wing forward and back. He has the students recover by centering on the seat and returning the inside brake to the neutral position. If necessary, a gentle pull on the A-risers will help lower the angle of attack.

However, in most cases an inadvertent spin happens when a pilot is circling in a thermal going very slowly and moves to tighten the circle by increasing the bank. The pilot pulls the brake on the inside of the circle, thereby stalling that side of the wing. The safe way to tighten a circle when flying as slowly as possible is to weight shift, often with a slight raising of both brakes to ensure ample airspeed. Dave confirms that one of the signs of an incipient spin is the inside wing suddenly retarding more than it would in a coordinated turn. We can call this a yaw to the

turn direction. Dave points out that right at this point is the best window of opportunity to stop the spin from progressing by moving up with the inside hand and centering in the seat.

With everything said, the way to stop a spin in any aircraft is to lower the angle of attack. In a paraglider, you can raise your hands and push on the speed bar. I have also seen pilots stop a helicopter flat spin by pulling down on the A-risers. The glider will enter a turning dive, which then can be stopped with the normal controls once the wing is no longer stalled. In any case, all aircraft enter a dive (usually a spiral) when a spin is stopped, so the pilot must be ready for the altitude loss and to make the right inputs to stop the spiral. If a spin occurs close to the ground, often the best deliverance is a quick and decisive reserve toss.

- Dennis Pagen

With thanks to Dave Prentice.

USHPA PILOT

2020 PHOTO ANNUAL › SEND IN YOUR IMAGES

Due to budget restrictions as a result of the COVID-19 pandemic, USHPA will not be producing a calendar this year.

But we know you've got high-resolution images you want to share, so for the NOV/DEC issue *USHPA PILOT* will feature the best photographs taken by members throughout 2019 & 2020.

Submissions are due September 10th.

Captions should include location, pilot name(s), photographer name, and a short description.

And we're always looking for stories!

No matter your experience level or wing type, we want to hear about your epic adventures, everyday flights, and community updates.

Send in stories that are important to you—weekend adventures, gear reviews, fly-ins and competition pieces, trip-of-a-lifetime stories, photo essays, learning moments, educational pieces (weather, flying techniques, site reviews), and creative content such as poems or artwork.

Review the submission guidelines at ushpa.org/editor then submit content using Dropbox at

ushpa.org/editorial-dropbox



Finding Lift [Executive Director, USHPA > MARTIN PALMAZ]

Spotlight on insurance and near-future objectives

Dear Membership: I know that the USHPA self-insurance policy has been a confusing and rather divisive topic since its inception. My hope is that by speaking to you through the magazine, I can help demystify why and how the Recreation RRG (our self-insurance organization) came to be, and clarify the relationship between the RRG and USHPA. I also hope this encourages and reveals our objectives for the near future, not only with lowered premiums, but also with a future with safer practices, fewer accidents, more time enjoyed up in the air, less time reacting to challenges, more individuals introduced to the world of free-flight sports, and a more unified and connected member community.

Insurance Premiums – Moving Forward and Making Improvements

We recognize the challenges many of our members are facing in these uncertain times. Therefore, even though insurance premiums went up during the last policy renewal, the board decided that USHPA will leave membership rates unchanged and absorb the difference. However, USHPA is also facing additional financial burdens, the newest due to COVID-19. Our hope and vision for the year ahead is to bring insurance rates back down, maintain USHPA's operations at affordable rates for all members, and empower our community to thrive despite the many challenges during this time. These objectives are not only possible but also achievable if we all come together.

Below you'll find background on USHPA's insurance policy, including what factors make costs rise, what we are doing to minimize the financial burden to members, and what you can do to help lower costs in the future.

The Insurance Crisis of 2016 and Self-Insurance as the Solution

Toward the end of 2015, USHPA received word that the primary insurance provider for our sports, Lloyds of London, would discontinue all coverage of hang gliding and paragliding activities, leaving us without coverage beginning June 2016. Without insurance, over 100 of the primary U.S. sites would close to

free-flight activities, and many instructors and schools would be unable to teach—perhaps permanently.

Together with the Foundation for Free Flight, the Professional Air Sports Association (PASA), some of our major schools, and many dedicated volunteers, USHPA researched alternatives. There were no commercial carrier options to achieve the minimum coverage required by many sites, but we found a silver lining that would enable us to serve our purpose and keep our many U.S. sites, instructors, and schools in operation: self-insurance. To achieve this solution, the free-flight community came together in an unprecedented and truly inspiring way. Hundreds of volunteer hours and donations from members helped us reach the \$2 million minimum capital necessary to start a new insurance company, the Recreation Risk Retention Group, known within our community as "Recreation RRG," "RRRG," or simply "the RRG."

What Makes Insurance Costs Rise and Why Do They Keep Rising?

Since the inception of the RRG, we've been self-insured, but that doesn't mean we're self-regulated. The RRG, an independent company based in Vermont and run by a volunteer board entirely made up of pilots (two of whom are former USHPA presidents), must adhere to strict guidelines, rules, and regulations determined by Vermont regulators, captive managers, accountants, actuaries, and others. These guidelines, rules, and regulations are in place not to create a lucrative insurance company, but to uphold the stable environment needed for self-insurance to be a viable, long-term solution. Unlike commercial carriers, self-insurance entities do not yield a profit; instead, any profit or loss is shared and divided between all members insured (e.g. USHPA, and by extension all of you). This is the unique and collaborative nature of self-insurance that we have always intended to leverage to benefit every member.

Like any insurance company, the RRG sets USHPA's premiums based in part on current and historic claims. Premium rates are also

subject to annual risk assessment estimations and projections calculated by contracted, independent actuaries separate from both USHPA and the RRG, with the purpose of creating an environment of long-lived success.

As such, a couple of factors, which USHPA members can directly influence, have required the RRG to increase USHPA insurance premiums. First is the increasing trend in serious accidents, member fatalities, and pilots flying outside the recommended operating conditions for their pilot rating and skill level. Second is that two members, involved in two different accidents, have chosen to file lawsuits against other members. This is in direct violation of the waiver each member signs when joining USHPA, which states that no member will sue any other member for flight-related injuries.

Short term, these trends and lawsuits require a premium adjustment. Long term, they have resulted in narrower coverage language in our USHPA policy, so that insurance is not available, for example, when a member decides to fly in conditions that are beyond those recommended for the member's rating. We hope that members, recognizing the lack of coverage when they are flying outside their rating's recommended operating conditions, will make better and safer flying decisions thereby lowering the accident rate.

In the short term, this all results in budgetary allocation for USHPA to provide funds to the RRG to ensure that the self-insurance fund will continue to be available (i.e. more risky behavior and claims require more budget for coverage). As a result, the increased insurance budget also directly impacts USHPA's budget allocation for other services and projects in our effort to fulfill our mission of ensuring the future of free flight.

Despite these challenges, self-insurance has clear advantages. Indeed, it was proposed decades ago as the best solution for our sports. Other sports, such as CrossFit gyms and scuba diving, have also benefited from self-insurance (risk retention groups), and I believe self-insurance can benefit the free-flight community as well. Although the RRG is a separate organization from USHPA, we have

a beneficial relationship that is not typical of traditional insurance companies. USHPA's financial stake and the pilot-elected board give us a direct dialogue and better ability to understand the risks the RRG insures, which should allow the RRG to remain as viable long-term insurance for free flight.

Absorbing New Costs and Supporting Instructors

We're working to lessen the impact on our community from the rising premium costs. Our sports aren't sustainable without instructors, so USHPA is absorbing the recent cost increases and continuing to subsidize instructor membership costs. At \$294 per year, the instructor membership fee continues to be less than the annual cost of insurance per instructor.

We are empathetic to the fact that instructors and schools have been some of the hardest hit by the insurance crisis and its outcomes, including new requirements to become certified by PASA to operate commercially on USHPA-insured sites. (Note that PASA is separate from both USHPA and the RRG. It provides third-party certification to help improve safety and lower risk—another direct result of the insurance crisis.) USHPA, the RRG, and the Foundation for Free Flight have been doing our best to alleviate these burdens.

In addition to subsidizing instructor membership fees, USHPA recently started a Commission Program to reward PASA-certified schools for bringing in new USHPA members, and is collaborating with the RRG on an app to provide digital 30-day membership forms/waivers. The Foundation for Free Flight (an independent, nonprofit charity dedicated to preserving hang gliding and paragliding in

CHANGES

You can find out more about these changes in the May member newsletter from USHPA or at:

ushpa.org/page/insurance-changes-2020

« Other sports, such as CrossFit gyms and scuba diving, have also benefited from self-insurance (risk retention groups), and I believe self-insurance can benefit the free-flight community as well. »

Interested in a more active role supporting our national organization? USHPA needs you! Have a skill or interest and some time available?

VOLUNTEER!

ushpa.org/volunteer

INSTRUCTORS

Questions about insurance, PASA, or anything else? You may find answers at:

ushpa.org/page/instructor-faq

the U.S.) also offers a grant to offset schools' PASA application fees and help them operate commercially. As a result of the COVID-19 pandemic, the USHPA board is also extending instructor certifications expiring in 2020 to 2021 to help reduce immediate burdens.

Moving Forward Together to Accomplish Our Vision: What You Can Do to Create Positive Change

During the insurance crisis, our community came together to fund the RRG as a solution and help preserve free flight in the U.S. That was a monumental achievement, and now we are in the process of problem-solving, assessing, and evolving as we navigate the new system.

With increased requirements, complexity, and costs for many in our sports, it's understandable that some instructors and chapters believe that the RRG isn't working or want to seek other insurance options.

Let me assure you that the purpose of self-insurance is and always will be to provide the flight school community with sufficient coverage to keep our beloved, historic sites—and schools—open for free flight; to maintain an environment where chapter volunteers can and are willing to continue to show up and serve; to meet the requirements of landowners to continue to let pilots use their land; and, of course, to protect pilots and ensure they are insured instead of left on their own when legitimate accidents do occur that result in injury to an outsider.

When commercial carriers no longer became an option for us, the RRG provided a path forward, and it is crucial that we keep it viable. Due to the collaborative nature of self-insurance, this is something that we can only do by working together.

As we work to improve, we're relying on our free-flight community's continued, active support. There are a few important ways you can help decrease accidents, and, in turn, decrease insurance premiums:

Fly safely: Being responsible for our own safety is a vital component of self-regulating our sports. Set an example by flying safely, and work to promote safety in your chapter and community.

Accident reporting: Please report all incidents that you've observed or been a part of,

« We have invested in something that's ours and that will help us preserve our sports for the future—but we all must continue working actively to protect it. »

whether a major accident or just a sprained ankle, at ushpa.org/page/incident. In addition to helping other pilots avoid accidents, reporting numerous minor incidents also lowers the actuarial risk associated with our sports, which should eventually help reduce our insurance premiums.

Volunteer: The RRG has been steadily responding to feedback and streamlining its processes. Creating the infrastructure and procedures for an insurance company was a major achievement, and the volunteers have done an amazing job with limited resources. As it is run primarily by volunteers—most of whom have little prior experience in the insurance industry—improvements take time. If you have any expertise in this field, we would welcome your assistance as we continue to make progress.

We have invested in something that's ours and that will help us preserve our sports for the future—but we all must continue working actively to protect it. This means encouraging your fellow pilots to fly safely, to follow site rules, and to refrain from lawsuits in the event of an incident. It means reporting any and all accidents, no matter how small. It means seeking accurate information about USHPA and the RRG (including contacting our office anytime with questions). It means sending us feedback or volunteering your time to help us improve. It means understanding that our situation isn't perfect, that many changes are outside of our control, and that we're doing the best we can to protect our sports for years to come.

We're in this together. We're learning together. And we can create positive change together. Thank you, as always, for your membership and your support.

- Blue skies, Martin Palmaz
Executive Director, USHPA

WORLD TEAMS

We're excited to announce that World Team competitors in Category 1 events are now eligible for coverage during extended trips associated with competitions.

Enjoy peace of mind while competing! Apply three months ahead of time at:

applications@recreationrrg.com

Do you have questions about USHPA policies, programs, or other areas? Email us at:

communications@ushpa.org

Let us know what questions or topics you'd like to hear more about!

Accident Review Committee [Analysis > CHRIS SANTACROCE]

Promoting and accepting pace in progression

*Why not set the world on fire? Seize the day!
If not now, then when? You only live once!*

These mantras fit our group of free-flight enthusiasts perfectly because we are an idealistic bunch and tend to be rather optimistic by nature. These days, few people would take exception to any pilot pushing their limits in the pursuit of improvement; in fact, as a community, we seem to have come to expect it.

But what about the other side of the coin? When we're out on the hill, do any of our flying friends advocate casting aside ambition? Any folks in our inner circles waving the flag to lower our operating limitations or do flights that are below our skill level? Does anyone support you in doing shorter and less technical cross-country flights than you used to?

These are all fairly rhetorical questions, but there is value in exploring these ideas. As we planned this particular accident community outreach, we wanted to focus on the fact that while pilots receive a tremendous amount of encouragement to expand their horizons, they often don't receive as much support for moderation and enjoying safer flights that don't push the boundaries too far.

In the last quarter of 2019 and in early 2020, there were a number of free-flight accidents and fatalities. As your USHPA Accident Review Committee, it is our job to dig deep into the incidents and share all relevant information to help keep our community safe. We know that knowledge is power, and we want to give that power to each member.

As we collect and comb through details of the incident data, we look for common factors. Often they jump right out at us, and other times they are harder to identify. We are always working to choose a subject matter that's pertinent to our current flying situations. This issue, we want to look at when it's OK to take a step back.

Tour guides, instructors, fellow pilots, competition organizers, mentors, and leaders within the community often see fit to pump up their fellow pilots and help them push their limits. By most accounts, their motivation is wholesome and genuine. Still, we have to wonder if it's always for the best. Many pilots remark that

they are getting more and more comfortable in stronger conditions. Hearing this, we have to ask ourselves if this is a positive or a negative "progression." When we look at the data, we see that the more that pilots put themselves in harm's way, the more pilots end up injured.

We don't want to take the wind out of anyone's sails, but we need to express the idea that it's OK to engage in simple flights only. It's OK to reduce your operating limitations as you become less current. As you get a bit older, it's OK to do simpler flights if you realize that your vision or your response times aren't as good as they used to be. It's OK to step down to a milder glider, and it is OK to fly early in the day when you know that your flight will be short. And it's OK to fly late in the day when you know it will result in a short but highly enjoyable sunset experience.

Will your fellow pilots continue to test the middle of the day and the strongest conditions that are available? Yes—and with luck, you will find yourself sharing the very same sunset with them, celebrating the great views and the marvel of aviation. Free flight is a gift, and our best way to show gratitude is to take personal responsibility for its long-term viability. Out of respect for the gift, we are obliged to discern between what is smart and what isn't smart on every flying day.

We challenge each member of the free-flight community to do their own soul-searching about what type of flying is really good for them and what they actually want out of each flying experience. We challenge every member to cast aside ambition and any agenda that they might have in favor of just aiming to smoothly enjoy another great day of foot-launched flying.

We support you no matter what you choose, and we want you to know that we care. In all your free-flight endeavors, you're not alone. 🇺🇸

« These days, few people would take exception to any pilot pushing their limits in the pursuit of improvement; in fact, as a community, we seem to have come to expect it. »

**AIRS
Accident/Incident
Reporting System**

is standing by at

airs.ushpa.org

If you've been injured or experienced a close call, file a report today.

All AIRS reports are completely confidential.



Southern New Mexico [contributed by ROBIN HASTINGS]

Sampling the offerings of southern New Mexico

Ask someone to name every state in the country, and if they can only get to 49, odds are that New Mexico is the missing number 50. If that person does remember to include the state, they probably don't know that anything exists south of Albuquerque. I'd like to illuminate this geographic darkness with specific information for the flying community. My goal here is entirely selfish. Our community wants more pilots to fly with! I hope to entice you with a rundown of a few of the southern New Mexico sites. With luck, a few of you will come down here for a visit!

New Mexico is vast. If you want a whole lot of not much, man, we have it! But it's beautiful. The common misconception is that it is simply one gigantic, flat desert—plus Santa Fe, Taos, and Albuquerque, where, indeed, the crown jewel of New Mexico soaring, the Sandias, loom over the city. It is a land of rattlesnakes, coyotes, and scorpions, and a couple of old prospectors remembering the gold strike they almost made. There are also some amazing mountain ranges (a few even have roads to the top) full of forests, and abundant wildlife. Though the majority of the population lives in the northern part of the state, there are also a few of us down south in Las Cruces, Alamogordo, Deming, Silver City, and Roswell. El Paso, Texas lies just across the

Texas border, 40 miles south of Las Cruces.

Down here, the Rio Grande Soaring Association is the local flying club, and we would love to welcome you into our crew! Is there flying in this area? Oh, yes! We have everything from thermal and ridge soaring sites to hike-and-flys and towing. Plus most of our sites are great for either paragliding or hang gliding. Keep in mind, given New Mexico's mild winters, you can get out almost any time of year.

The first site to visit is Dry Canyon, probably the best known to pilots outside the region. This is a H3/P3 site in Lincoln National Forest, 2,400 feet above the town of Alamogordo, where twice a year, in the late spring and early fall, the Rio Grande Soaring Association likes to put on a fun fly-in. We launch in any wind direction from due west to south/southeast. You can have a sled run from Dry, but it isn't common. Almost everyone soars here on almost every flight. The launch, in the foothills of the Sacramento Mountains, is about 7,000 feet above sea level, and thermalling up to 10,000 feet is routine. Reaching 15,000 feet is not out of the ordinary. It's a ridge soaring and thermalling site, with a concrete ramp for hang gliders and a smooth, clear slope for paragliders. The designated LZ is a grassy 10-acre field,

but going XC to the north will present you with a wealth of alternate landing spots. The road to launch is kind of rough (4WD with good clearance is recommended), and the glide to the LZ is a bit far (about 8:1), but you don't want to miss this site if you are coming through the area. I recall watching Rome Dodson, a visiting pilot, waiting out a thermal at the LZ and then instead of setting down, taking it up from 300 feet and landing 30 miles to the north. That happens here.

Southwest is the prevailing wind direction in New Mexico, so it should be no surprise that Magdalena Rim, northwest of Las Cruces, faces that direction. This is a ridge soaring and thermal site about 500 feet above ground level, with, again, about an 8:1 glide to the landing zone though you can also top land at the site. The launch is smooth enough to take a stronger wind than at Dry Canyon or La Luz, and it doesn't require 4WD to get there. Access requires a 700-yard hike from the road, so most hang glider pilots bring a driver and plan on a flight to the LZ (which is about eight acres in size), rather than top landing and hiking the wing back to the car. This is one of the most benign sites in New Mexico. Rated a H2/P2, it is easy to soar. But benign doesn't mean it doesn't work! During one of my flights here, I made a low save and wound up going from 5,500 feet to 11,000 feet and setting the current XC record (only 12 miles, but it's still a new site).

About 50 miles west of Las Cruces looking down on the town of Deming, New Mexico, is the Little Floridas site. This west/southwest-facing site is 5,500 feet above sea level and 900 feet above ground level and is rated H2/P2. Want to fly cross country for the first time? This is the place. Want an easy place to test out your skills for a first mountain flight? This site is one of the best. Run off the portable ramp, soar the ridge, thermal up, and easily go over the back to Interstate 10 and follow it downwind. Or make the 4:1 glide out front to the limitless landing fields; either way, you're going to have fun.

The paraglider launch is a smooth, grassy slope a few hundred yards further north. The road up is definitely 4WD, but the rewards for making the drive are outstanding. A few years back, Bill Cummings launched the site in his Sport 2, got a mile or so over launch,

soared east back to Las Cruces, packed up the glider, and pulled it on the wheels up the street to his driveway. On another occasion, while I was flying, I rounded a ridge right after launching to see a herd of a dozen ibex taking off, fleeing the biggest "eagle" they'd ever seen. New Mexico is full of pleasant surprises like that.

« Is there flying in this area? **Oh, yes!** We have everything from thermal and ridge soaring sites to hike-and-flys and towing. Plus most of our sites are great for either paragliding or hang gliding. »

Though these are three of the more popular flying sites, we have something for almost any wind or conditions. About 5 air miles north from Dry Canyon is the H2/P2-rated La Luz site. Like Dry Canyon, it is a ridge soaring and thermal site, though its LZ is several times the size of Dry Canyon's. Another site, located west of Las Cruces, is a lot of fun when the wind comes in north or northeast. Volcanic Peak was discovered many years ago by our club president, Terry Cummings, but she and her husband Bill rejected it as having far too nasty a road. However, a few years back while out exploring, Bill and I discovered that somebody had graded the road to access the communications tower on top. Launch may be only 375 feet above ground level, and facing an uncommon wind direction, but it sure does work well when the winds are north.

BELOW The landing zone for Dry Canyon, on a fly-in evening in May 2015. Photo by Robin Hastings.



ABOVE Rick Maddy of Colorado launching Dry Canyon, October 2019. White Sands National Park is in the background to the west. Photo by Robin Hastings.



ABOVE LEFT Bill Cummings relaxing on the portable ramp at the Little Floridas site. The landing zone is straight out from the ramp. Photo by Robin Hastings.

RIGHT Wyatt Lines flying the Little Floridas, November 2019. The Big Floridas and the Dragon's Back are in the background to the south. Photo by Robin Hastings.

BOTTOM Jon Dempster launching his PG at Dry Canyon, October 2019. Photo by Robin Hastings.



Right on the New Mexico/Mexico border, close to El Paso, you will find a sandy, 200-foot mesa called Anapra that faces east. Access is easy 2WD, the LZ is huge, and you can launch pretty much wherever you like along the half-mile ridge. This is a great place for a first foot-launched altitude flight, and not bad for soaring either if the winds are 10 to 20 mph.

There are two mountain sites near El Paso—Agave Hill and Nelson's Launch—that take west/southwest. Both sites are rated P3/H3 or P2/H2 with an instructor. Though a couple of hang glider pilots have launched Agave Hill, it is more of a site for paragliders. Each site requires a bit of hiking, but as both are located at the foothills of the Franklin Mountains, pilots can bench up and top out thousands of feet above launch.

Kilbourne Hole, another interesting paragliding site, is located out in the desert some 20 miles northwest of El Paso. This is what geologists term a "maar," which is a crater created when magma hits ground water and causes a huge steam explosion. As you might guess, most maars are circular lakes, but not this one. It is a 400-foot-deep, mile-wide empty crater, floored with sand, and launchable in almost any wind direction (though it works best in west and southwest). Finally, a distant site for most of us, but still in southern New Mexico, is Guadalupe Rim, northwest of Carlsbad, New Mexico. This site is 1,500 feet above ground level. Launch faces west on the rim of a vast valley, floored by grazing

land with (again!) infinite landing zones to choose from within easy reach of the smooth slope launch. You can ridge soar and thermal 20 miles north or 20 miles south, top land, and walk right back to your campsite. This place is remote but really fun, and is home to an annual get-together that happens in February, hosted by the Rio Grande Soaring Association, which we encourage all of you to come to!

Are you ready to visit RGSA country now? We are ready to welcome you! Southern New Mexico has some of the best, and least crowded sites of any place in the country. We want more pilots to fly them! If you're looking for your next flying destination, why not give us a try? The weather is nice, the cost of living is low, the quality of life is good, and the soaring can be exemplary. Do come visit us here, or best of all, make this place your home. We'll be waiting to welcome you! Contact me at RNHastings@zianet.com for more information. 🇺🇸



ABOVE The author flying Magdalena Rim in February of 2017. The view is to the south. Photo by Shelley McKinlay.

DUNE COMPETITION

SEPT 26-27, 2020

AEROTOW COMPETITION

SEPT 25, 2020

DEMO GLIDERS

BY MOYES & WILLS WING AVAILABLE

2020

JOCKEY'S RIDGE STATE PARK

HANGGLIDINGSPECTACULAR.COM

252.441.2426

KITTY HAWK KITES

48th ANNUAL

HANGGLIDING SPECTACULAR

FLY FLY FLY

The team from Kitty Hawk Kites, Windsports, and DLR. Photo by Arno Trümper for DLR.



Making Flying History

1902 Wright and 1895 Lilienthal gliders fly side-by-side

by **MARKUS RAFFEL** and **PAUL GLENSHAW**

IN 2019, the hang gliding schools Kitty Hawk Kites (North Carolina) and Windsports (California) made the first side-by-side flights with a 1902 Wright and 1895 Lilienthal biplane glider. The Wright Glider reproduction was built by the Wright Experience for the 2003 Centennial of Flight. It was made with the highest possible degree of authenticity and was constructed using only materials and tools available in the early 20th century. The replica of the 1985 biplane glider was authentically made by the Otto Lilienthal Museum in Anklam, Germany. The wing fabric from an original Lilienthal glider in Moscow was analyzed to determine its weave, and then the fabric was reproduced on a historic loom. The final geometry of the glider was checked with 3D scans of an original 1896 Lilienthal glider in the National Air and Space Museum's collection. It is one of nine that Lilienthal sold during his lifetime—this one to newspaper magnate William Randolph Hearst, who had it flown in Staten Island in 1896.

The first free glides in a Lilienthal monoplane replica, after Lilienthal's death in 1896, took place in 2018, when the German Aerospace Center teamed up with Andy Beem, owner of Windsports, a long-running hang gliding school in Los Angeles. Beem also made his first flights in the Lilienthal biplane replica at Marina Beach near Monterey.

"It responds beautifully in pitch and roll," Beem says. "I've never had so much fun as having the opportunity to fly that glider. When I fly a hang glider, I have an umbilical cord connecting me to the wing. But in the Lilienthal, I am the wing. It is a pure bird-like feeling." Some months after, I hatched the idea of simultaneous flights of the Lilienthal and Wright gliders. "It's fantastic that somebody suggested that Markus check with us," said John Harris, the founder of Kitty Hawk Kites. "I'm really excited to see them side-by-side. It's never happened before."

On December 14, 2019 the authentic replicas of the 1902 Wright glider and Lilienthal's large bi-plane were

carried out to the dunes of Jockey's Ridge State Park in North Carolina and assembled. They were moved to the top of the dune as the grey clouds blew away to reveal a perfect blue sky. The wind was blowing from the southwest which forced the team to launch on a dune with only a little slope. This didn't allow starting the glider without being tethered. However, with one string that replaced some of the downhill force and two strings required to secure the large span of the Wright glider in the vicinity of the ground, launching was supposed to work.

The pilots Andy Beem (Lilienthal) and Billy Vaughn (Wright) took their places and waited for a favorable cycle in the wind and launched. At that moment, two seminal aircraft, both groundbreaking critical steps to the invention of the airplane, were in the air together. It was obvious what each replica represented—a step in the overall development of aviation with Lilienthal working directly from bird anatomy and the Wrights coming after, their design pointing to

the airplane.

"I've flown the Wright glider a number of times, but I am very pleased to have had the presence of mind to look out the left wing and through the structure of that aircraft and see the Lilienthal glider flying next to me. It dawned on me after the fact that this was a view that no one ever had. It is very humbling actually. The Lilienthal glider was much more intuitive. I am a hang glider pilot and I was right at home. It felt fantastic and simple, and it landed just like I thought it would. It was great!" said Billy Vaughn (Kitty Hawk Kites, NC). He also noted, "You can spend a lot of time reading, you can go to the museums to see the aircraft, but there is something that is just not replaceable about actually flying the aircraft: to be, in a tactile way, connected to the folks who invented them. That is another humbling experience, and I think it is a valuable one—it is one you can't get in any other way."

Andy Beem said after the flights, "It was one of the best days of my life. I got to fly an authentic replica of an Otto Lilienthal glider, and I got to fly side-by-side with the 1902 Wright glider, being part of history, showing Otto Lilienthal's influence on the Wright Brothers. I am very impressed with Otto Lilienthal's engineering and design of his glider using weight shift for take-off, control, and landing. Also seeing how the Wrights

THE GENIUS of OTTO LILIENTHAL



The aviation pioneer Otto Lilienthal was the first person to invent, build, and publicly fly several aircraft, more than 125 years ago. In 1895, he received the U.S. patent for his monoplane glider. This "Normal Soaring Apparatus" was patented and sold several times that year, both in America and Europe. It was the world's first production aircraft. The theory of curved wings, developed and published by Lilienthal, together with more than 100 photographs that showed him in the air, contributed to the epochal shift in the rapid development of aeronautics. Octave Chanute and other leading experts corresponded with Lilienthal. Chanute, author of the other most influential book of that time and later a friend of the Wright brothers, followed Lilienthal's approach of carefully performed flight tests, and with that led several younger men to successful flight performances in 1896 and beyond. The Wright brothers conducted extensive glider tests in 1900–1902 before their first powered flights in late 1903. It was this step-by-step procedure, which was also used and recommended by Lilienthal, that made the "airmen" so much more successful than the "chauffeurs" who tried flying powered machines without sufficiently honing their pilot skills beforehand. The Wrights adopted the basic design of the Chanute-type biplane hang glider, which flew well in the 1896 experiments near Chicago. The 1896/1897 Chanute-Herring biplane flew as stably as Lilienthal's bi-plane, but took additional advantage of a bridge-building design that allows extending the wing span. This structural improvement clearly shows the great engineering practice of Octave Chanute. The Wright brothers took advantage of prior discoveries, using the framework structure of Chanute and Lilienthal's aeronautical data on lift and drag of curved wings published in 1889 for their gliders and later their aeroplane. They extended this knowledge and later additionally studied the positive effect of an increased aspect ratio in their wind tunnel. On top of that, the Wright brothers were the first to efficiently solve the problem of adverse yaw, the natural and undesirable tendency for an aircraft to yaw in the opposite direction of a roll, by their combined actuation of wing-warping and rudder.

PHOTO BY PAUL GLENSHAW



Billy Vaughn (Kitty Hawk Kites, NC) as "Orville" and Andy Beem (Windsports, CA) as "Otto." Photo by Arno Trümper for DLR.



solved some of the flaws in the design of the Otto Lilienthal glider and made their glider more controllable, and ultimately developed the world's first airplane."

The side-by-side flights of the Lilienthal and the Wright gliders on historic ground in the Outer Banks in mid-December was the highlight and closure of the series of flight demonstrations that the German

Aerospace Center made with the help of open-minded American hang gliding experts. They pronounced the value of international respect and open-minded information exchange for progress in science and engineering.

This approach is reflected in the exhibition at the Wright National Memorial where photographs and facts about Lilienthal are displayed with

the header: Observe, Ask Questions, Follow the News, Read. This was the spirit of the Wright Brothers when they learned from Otto Lilienthal before they revolutionized the world with the invention of the airplane. This is Lilienthal's legacy—what he learned in the Royal Aeronautical Society in his early years and what he encouraged others to do later when he pioneered the art of flying. 🇩🇪

ABOVE Andrew Beem flying Otto Lilienthal's "Großer Doppeldecker" next to a modern offspring. Photo by Markus Raffel for DLR.
BELOW From the very first repeated human flights with birdlike wings to a controlled flying machine ready for engine integration: Otto's glider (right) and what the brothers made out of it in just 7 years (left). Photo by Arno Trümper for DLR.



FOUNDATION FOR FREE FLIGHT
 SITE PRESERVATION, SAFETY & EDUCATION, COMPETITION SINCE 1989

PASS THE TORCH BEFORE YOU CROSS THE FINISH LINE!

ESTATE GIVING PROMOTES GENERATIONAL FLYING

CHARITABLE GIFT, ESTATE, AND TAX PLANNING ENABLE YOU TO MAKE TAX DEDUCTIBLE GIFTS USING **RETIREMENT ACCOUNTS**, IRAS, 401KS, SEPS, AND EMPLOYER PLANS TO FUND YOUR PILOT LEGACY. YOU CAN NAME THE FOUNDATION FOR FREE FLIGHT AS AN ALTERNATIVE BENEFICIARY ON RETIREMENT ACCOUNTS THAT PASS OUTSIDE OF TRUSTS AND WILLS.

CALL OR TEXT (559) 677-7546



• [FOUNDATIONFORFREEFLIGHT.ORG](https://foundationforfreeflight.org) •
[JAYNEPANFILIS@FOUNDATIONFORFREEFLIGHT.ORG](mailto:jaynepanfilis@foundationforfreeflight.org)

FOUNDATION FOR FREE FLIGHT IS A 501 C(3) NON-PROFIT CHARITY
 STAFFED COMPLETELY BY VOLUNTEERS SINCE 1989
 DONATIONS ARE TAX DEDUCTIBLE

FLYING JAPAN

IN THE TIME OF COVID-19

by BILL NIKOLAI

A **SENSE OF DANGER** and foreboding hangs in the air, even as my Boeing Dreamliner hurtles through the thin atmosphere, racing the setting sun to Tokyo in early March 2020.

My trip begins at Vancouver International Airport, where international departures has never seemed so empty, so seemingly relaxed, so easy to navigate. Check-in counters are devoid of passengers, security procedures so very fast—in fact, all processes from arriving at the terminal right through to waiting at the boarding gate are completed with astonishing ease. This is what the threat of a pandemic will do to the usual harried, frenetic pace of air travel. The crush of people that sustained a flourishing industry is gone; in its place is the laid-back yet tense respite created by fear.

An abundance of white masks makes it difficult to discern the collective degree of nervousness on the part of airline personnel and passengers alike. In the absence of complete faces, the eyes and tone of voice alone offer clues to people's level of apprehension. Though travelers sustain employment, one imagines that airline staff wonder who among the transients is carrying more than just baggage.

My journey was preceded just two weeks earlier with a holiday in the southern Tyrol and other parts of northern Italy. My family visited Milan, and days later the Duomo was closed to tourists. Our wandering in Venice coincided with the festivities of Carnevale—which ended prematurely when COVID-19 was discovered in that iconic city. When we got home, we learned we had been in the heart of a coronavirus hotspot. My wife, a nurse, worryingly brought home the mother of all colds. After days of sinus congestion, headaches, and self-isolation, she was tested. Negative. We could breathe easy.

And now I was heading to the Far East, on a trip that was booked well before the world began its latest dance with dread. This was to be another holiday of sorts, but one that had its own element of risk. I was planning to join a pal from Canada and groups of Japanese paraglider pilots to do some soaring.

I hadn't been paragliding for five months since the end of summer and, like any aviation, safely flying a "bag" from a great height requires currency. The weekend before my Japan trip, between rainy spells, I hiked up Blanchard Mountain in Washington state and hucked myself

from the Samish Overlook, high above Chuckanut Drive. I glided out over the Skagit Valley marshland and ran out a nice landing on gentleman-farmer Tom Wake's driveway, using it as my runway between two soggy fields. It was not like riding a bicycle, yet the flight felt reassuringly familiar. Just shy of five months earlier, a good friend had passed away in a paragliding accident in Africa, and the sting of that loss hadn't yet subsided. In the back of my mind, I also remembered another paraglider pilot who, two years ago, had a fatal crash near the same viewpoint where I launched, so to complete that flight routinely was comforting.



« When we got home, we learned we had been in the heart of a coronavirus hotspot. »

Arriving in Tokyo is one thing; getting to Shizuoka Prefecture, where I was hoping to paraglide, is another. After a 5 a.m. wake up in the Land of the Rising Sun, I make my way to Atami by bullet train, where a Canadian friend, Norm, and former Japanese champion Ayumu Miyata are waiting to grab me and whisk me to the country town of Kawane. En route, in the SkyTEC Flying Academy van, we catch tantalizing glimpses of Mt. Fuji, the compelling cone showing signs of life with wind-blown plumes billowing from its snowy top. Turning north at Shimada City, we are soon at the main SkyTEC landing zone, near Kawane.

The LZ is located on the edge of the Oi River (or "Oigawa") in the midst of a tea-growing region, an area characterized by impeccably trimmed, verdant hedges. The stream is a shadow of its former self as the Oigawa, like most Japanese rivers, was long ago tamed by dams. These days, excavators and trucks are dotted sporadically in the expansive streambeds on the margins of the thin ribbon, harvesting material to be crushed for Japan's insatiable

construction supplies industry.

The east-facing takeoff utilized by the school is about 700 meters above the LZ. It took almost two years of negotiations and landscaping to turn a steep logging clearcut into the neatly-manicured grassy launch, now big enough to comfortably lay out at least five gliders. Officially called Nanamagari Sky Park, the name refers to the seven snake-like bends in the river that can be counted from the site, "nana" being the number seven.

Five hundred yen (less than \$5) and a quick 15-20 minute shared drive up a narrow, wooded, but mostly paved road gets you to a stunning vista of the Oigawa and the expansive valley where the river is situated. Beckoning from the east is Fuji-san, ever magnetic, no matter what perspective you view it from. Local pilots "Fireman" (a Shizuoka firefighter who flies a flame-colored wing), "Muscle" (a 70-year-old IT guy who has a fifth-degree black belt in karate testifying to his fitness), and "Tiger" quickly lay out their gliders and prepare to launch. Naruse-san, our shuttle driver and informal launch

marshal (and also a pilot), takes out his smartphone and begins to film everyone's takeoffs so—in a typical Japanese quest to perfect one's technique—we can do post-flight analyses.

I'm content to defer to the locals and watch and photograph for a while, assisting with the occasional glider re-position or fluff. The fact that I'm sleep-deprived also plays a role; I want to get settled and focused and find out about any of the site's idiosyncrasies before I step into the void.

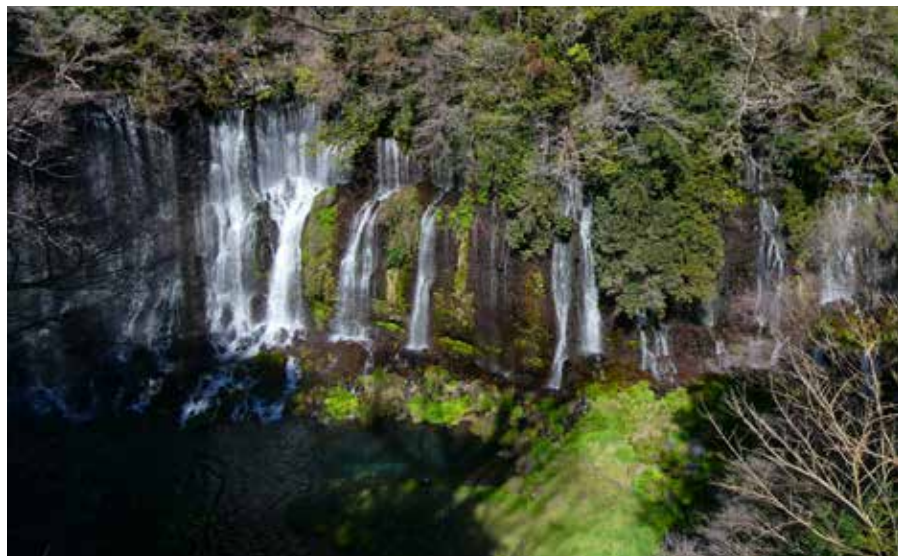
It's a beautiful morning, and it doesn't take long before I'm laying out my own gear. Radio chatter in my ear is turned down as I concentrate on my checks: leg and belly straps clipped, helmet secure, tracking devices and variometer on, reserve handle in place. I take a deep breath, turn, evaluate the windsocks and look for traffic, then I'm off.

As always, once in the air, extraneous thoughts—including the worrisome clutter of COVID-19—blow away like so much chaff. I marvel at the scenery—an airborne tourist excited to soak up the view while listening for the sweet beeping of a vario chirping out evidence of lift and the promise of an extended flight.

Amid the rush of the wind, I can faintly hear the whistle of a steam loco-



LEFT Ayumu Miyata, Bill Nikolai, and Keiko Hiraki. Photo by Satoru Maeda.
ABOVE Launch at Nanamagari Sky Park near Kawane. Photo by Bill Nikolai.
OPPOSITE Masaki Nakamura ("Fireman") with Mt. Fuji. Photo by Bill Nikolai.



motive—or “SL” as these 1930s heritage trains are referred to in Japan—drifting up through the several hundred meters between me and the riverbed. Twice a day, all year round, the Oigawa Railway Company (“Dai-Tetsu”) runs four different locomotives between Kanaya Station and Senzu, upriver. I watch the progress of the SL below me, marking the billowing steam and smoke as the tourist train crosses the red bridge over the Oigawa into the tea fields on the far side of the valley. Too high to make out details, I wonder if the chugging locomotive is Thomas the Tank Engine, added to the Oigawa fleet in 2014. I recall that the Thomas stories were originally told by a father to his young bedridden, measles-stricken son. It all seems weirdly comforting.

Bringing full attention back to my flying, I see gliders getting lift in two different areas and consider whose lead I want to follow. I elect to go downstream (south, toward the coast) along the launch ridge, where a visiting instructor is making some tentative cross-country advances. My hope is to gain altitude along his route and then make the jump across the valley in order to work the far ridge.

Alas, my attempt to cross the gap finds me in significant sink, and I decide I’ve had a great first flight in Kawane and choose to meander around over the river and put my glider down at the LZ for lunch. Sustenance comes by way of a pit stop at a local 7-Eleven (convenience stores are ubiquitous in Japan); the rice balls (onigiri) and fried chicken (karaage) go down well. The afternoon brings another round of delightful sky-cruising over the Oigawa and terrain behind launch, then more earth-bound lollygagging around the LZ, where Miyata-san and his group have erected a climbing wall and set

TOP Soaring over the Oigawa (river). Photo by Bill Nikolai. **MIDDLE** Shiraito Falls, near Mt. Fuji. Photo by Bill Nikolai. **BOTTOM** Nanamagari Sky Park takeoff. Photo by Bill Nikolai.

« Once in the air, extraneous thoughts—including the worrisome clutter of COVID-19—blow away like so much chaff. »

up a slackline to occupy the non-flying time.

And so it goes ... flying, eating (typically Japanese mainstays like sukiyaki, sushi, or okonomiyaki—sometimes referred to as “Japanese pizza”—for dinner), and bathing! Kawane boasts a municipal hot spring facility as well as a hotel with its own impressive bath (each one costs just over 500 yen). The soaking experience is communal—even now in this time of COVID-19—although with separated men’s and women’s sides. One washes thoroughly outside the hot pools and then lingers in the bath for as long as desired. It’s typically a contemplative experience, not a place for idle chatter, but rather a chance to relive the day’s flights and consolidate memories of those ephemeral adventures. A highlight in most Japanese hot springs is the “rotemburo” or outside bath. We have one evening of precipitation and the cold pinpricks of rain on our shoulders feel like multiple inoculations, metaphorically protecting



ABOVE Okonomiyaki (“Japanese pizza”)! Photo by Bill Nikolai. **RIGHT** Shizuoka tea fields and cherry blossoms. Photo by Bill Nikolai. **BELOW** Takeoff, Izu Flight House. Photo by Bill Nikolai.

us from the virus lurking “out there.”

The days pass by all too quickly, with visits to other flying sites including Asagiri (in Mt. Fuji’s backyard), Izu

THINKING OF GOING?

Site guide for the entire country, from the Japan Hang & Paragliding Federation (JHF): https://jhf.hangpara.or.jp/area/index_eng.html

English tourist brochure featuring the Kawane area is available for download: <http://www.okuooi.gr.jp/wordpress/pamphlet/>

Ayumu Miyata is the owner of SkyTEC Flying Academy in Kawane. He is an excellent instructor and would be happy to orient you to Nanamagari Sky Park (east-facing launch) and the west-facing launch also. Site fees are 1,000 yen per day (under \$9) and it costs 500 yen to get rides up to launch: <https://www.facebook.com/SkyTEC-Flying-Academy-1699684670278861/>

Kameoka Kyoto Birds Paragliding School (Mr. Ozawa). Site fees at Kameoka are 3,500 yen per day: <https://www.facebook.com/birdspara/>





tinyurl.com/FlyingJapan

« The cold pinpricks of rain on our shoulders feel like multiple inoculations, **metaphorically protecting us from the virus lurking “out there.”** »

Flight House (on a peninsula south of Fuji-san), and Kameoka (very near the city of Kyoto). I meet more amazing members of the Japanese paragliding community: another former Japanese women's PWC champion (Keiko Hiraki) at Asagiri, Nobuyuki Suzuki (a long-time paragliding school owner who is still flying after suffering a spinal injury 7 years ago) in Izu, and the club members flying under the tutelage of the Kameoka Kyoto Birds Paragliding School.

The pilots soaring during my visit to the Kyoto area include a husband and wife who both have seen their 70th birthdays. In fact, the rest of the cohort out that day looks like it has more than a few years under its collective feathers. I follow one intrepid septuagenarian up over 800 meters above launch in a big, fat, lazy thermal. Over my shoulder, the ancient city of Kyoto, with its prominent modern-day tower, reveals itself in the distance. It's March 13, just two days after the World Health Organization finally officially declared COVID-19 to

be a pandemic.

Coincidentally, the weather in western Japan has started to turn, with conditions unfavorable for more flying before my departure. I visit various temples and shrines in Kyoto and am grateful for the reduced number of tourists, but all too aware that there is a reason for the lessened traffic. I contact old friends in the Fukuoka area and make plans to nest there until my return to Canada. We do day trips to restaurants and stores that are still open but refrain from shaking hands with other acquaintances in the area, a bit of an awkward, illogical tango with the circumstances. Radio from Canada alerts me to new travel advisories and a government edict dictating that flights home will be restricted and eventually curtailed and that I am in store for 14 days of self-isolation upon my return to Vancouver.

Heading to Tokyo International Airport, I'm left with idyllic spring memories to carry me through a troubling, uncertain summer. 🇨🇦



LEFT Bill Nikolai, with the Kameoka Birds. **THIS PAGE** Ayumu Miyata and Norm Krcmar flying at Asagiri, near Mt. Fuji. Photos by Bill Nikolai.



FAR-OUT FLEDGLING

A rookie's recap of a lifetime experience

by LINDSEY RIPA

FLASHBACK to May 17: I am standing with a group of paragliding students on a sunny spring morning in Boulder, Colorado. It is the introduction day to a paragliding course that I hastily bought with my tax refund a few months prior. Had I ever participated in air sports of any kind before? No. Had I taken a tandem to give me the slightest inkling of whether I would even like this sport? Also no. As we finished up a quick icebreaker to introduce ourselves, my instructor

jokingly warned us that after our first flight, we would likely quit our jobs in pursuit of more airtime. Well, I did exactly that!

At the time, I was 23 and had just completed graduate school. I was working full-time as a Certified Public Accountant (CPA), and I felt completely lost. After years of rigorous testing, I realized I did not like where I was all that much, and I needed a new purpose, so as not to fall into the existential rut of eat, work, sleep, repeat. After two years of working, I

lived up to my millennial stereotype by quitting my job in order to pursue my newfound passion for paragliding. My partner, Tyler, and I had saved what we thought would be enough money to get us through a year of penny-pinching travel. Let me be clear, I had no guarantee of a job when we returned. But I was young, without kids, without a house, without any significant debt—if not now, then when?

So, our itinerary was set. We had a rough idea of where we would go

« I was young, without kids, without a house, without any significant debt—if not now, then when? »

based on our budget, but we were mainly following the wind. All in all, we spent 9.5 months on the road, raking in air time. Though we could have made it a full year, after nine months and hundreds of hours of flight time, we desperately wanted to buy new wings, so we cut the trip a little short. The international wrap-up was: Bali, Indonesia for two months, Bir, India for one month, Pokhara, Nepal for five months, and Algodonales, Spain for one month. We also spent a week in both Marshall, California and Salt Lake City, Utah on the return trip home.

The first stop on our tour was Bali, a sun-soaked paradise where I got accustomed to the character of my wing. When the trade winds hit just right, the main site, Timbis, allows for coastal soaring along the entirety of the Bukit Peninsula. To the west, the cliffs get taller and on the best days, we were able to reach 1,000-2,000 feet over the beach! The hardest part of flying in Bali was getting off launch, as the compression can be quite strong. I fine-tuned my high wind launch technique, top-landed endlessly, and used the laminar air to practice beginner maneuvers like weight shift wingovers, spirals, and pitch control, which I had practiced during an SIV course. To wind down, I would take in the salty air and enjoy views of coral reefs and playful monkeys in the trees from my comfortable chair in the sky.

From Bali, we moved on to Bir, India which soon became my favorite place to fly. The food was delicious, the locals were friendly, and this small but growing community in Himachal Pradesh was a welcome reprieve from the chaos one normally finds in India. Over the course of three and a half



ABOVE Timbis, Bali. Smooth coastal soaring along the Bukit Peninsula.
OPPOSITE Algodonales, Spain. Tattered shoe photoshoot. Photos by Lindsey Ripa.

weeks, I went from regularly bombing out to sending the 100-kilometer milk run to Dharamshala and back. Fueled by milk chai and parantha, I learned something new each day in the sky. It's also home to one of my fondest memories—coring a smooth 5 m/s thermal to cloudbase in sync with a Himalayan vulture. Bir is the perfect place to fly your face off each day

then wind down by sipping chai and watching the red Indian sun disappear below the horizon.

While Bir was memorable for epic cross country conditions, Pokhara holds a place in my heart as a second home. The pace of life in this town was slower, there was a rich culture, and it was impossible to get used to the site of the 5,000-meter peaks



rising up from the valley floor. We stayed in Pokhara long enough to get a true feel for the daily flow of life. It was also where I became a more technically proficient pilot. The milk run to the Green Wall and back was one of the hardest 35-kilometer flights I have ever done, due to a low arrival at a few crux points which can feel quite committing. Over five months, I learned about valley winds, gaggle flying, inversions, embedded thermals, and speed to fly. Also, it's almost impossible to be mad about landing out when a mob of children would come running from half a mile away to chat with the stranger who fell out of the sky. I will never forget one cheeky kid who asked me why I stopped turning in circles, as s/he proclaimed, "This is how to stay up!"

Finally, we eased back into western civilization by spending a month in Algodonales, Spain. Located in the southern, agricultural state of Andalusia, Algodonales offers a mixture of mountain and flatland flying. Takeoff is usually from either Levante or Poniente launches just outside of town, and once in the air, I was treated to expansive views of rolling olive

groves, turquoise lakes, and white-washed Moorish towns. The beginner run here was a 25-kilometer flight to Ronda, and on the most epic of days, it is said one can soar up to 4,000 meters and crest the mountains to land on the beach! Life was slow here, so when the flying day was over, we could have a midday siesta and wake up refreshed to enjoy a cold "copa" of beer and accompanying tapas.

Between the two of us, we spent \$12,000 USD not including wings (you read that right!) to live the life, get some major airtime, and absorb lessons that would have taken years at our home site. At each location, I was able to develop a new skill to add to my arsenal. Below, I've outlined a few of my key takeaways that eager low-airtime pilots may find beneficial.

Take Time on the Basics

Slow is smooth, and smooth is fast. Linking up the basics, like alpine forwards, high wind launches, pitch control, weight shift wingovers, and spot landings will establish a solid foundation for stringing together those initial kilometers. No one wants to be the pilot who is getting tossed

on launch or channeling their inner dolphin while in the air. By mastering the basics, each flight can start and end with confidence.

Any Wing Can Go XC

For all but the last two months of our trip, I flew an Advance Epsilon 8. This wing took me from 7 to 100 kilometers. Yes, cross country is slow going on a lower-performing wing, but I was in a confident headspace that allowed me to focus on thermal triggers and route planning rather than wing control. Don't try to cheat the learning process by switching up wings too quickly—I put in 280 hours on that Epsilon! Every path is different, but the worst thing that can happen from putting in "too much" time on a lower-performing wing is that you are all the more capable of handling your next wing. I am now happily on an Ozone Swift 5, and after seeing a local pilot send 220 kilometers on their high-B, I have some inspiration for what this wing can do!

The Best Pilots Still Bomb Out

As we progress, bombing out becomes less frequent, but we will all have

LEFT Mardi Himal, Nepal. A classic hike-and-fly beneath Machapuchhare (Fishtail). Photo by Lindsey Ripa. **RIGHT** Pokhara, Nepal. Author Lindsey Ripa landing lakeside after going XC. Photo by Tyler Burns.

those moments where we land early and watch our friends sail away. The good news is that a bomb out is usually a lesson in growing our mental or technical strengths. Instead of letting the disappointment absorb you, spend a little time reflecting on the flight—ask yourself, were you scared, impatient, or indecisive? Did you misread a cloud, push bar through some decent lift, or launch into a lull? The possibilities for learning are endless. A critical lesson I have learned is that no single flight defines you. It is easy to get hung up on one's faults, but try to give your successes the same attention. A practical way to manifest this is to keep a flight log and write down one thing you succeeded at each flight and one thing that needs improvement, whether mental or technical.



Prepare for the Flight You Want

Is today the day to get high and fly far? Despite the joke that pilots only sky out if dressed in a tank top and

flip flops, it is best to be prepared for the elements at hand. Too many times, I have landed out like a zombie sun-burnt and starving with no water and



CURE2

ENLTF-C

HEAL YOUR SOUL

(801) 699-1462

DEMOS DEALERS DATA



 BRUCE GOLDSMITH DESIGN

WWW.BGD-USA.COM

« I cannot stress enough the importance of diversifying one's flying from the local hill. »

a dead phone. Without a doubt, my stamina and decision-making were affected while in the air. Puffy jackets, wind buffs, eye protection, sunscreen, lip balm, water, snacks, extra battery, retrieve money, GPS, and a diaper (and a small trash bag for storing said diaper) are now all mainstays in my

XC kit. I have a list up in my gear room for a final check before heading out the door—it's very helpful!

Learn to Read a Skew-T

Remember how daunting the web of glider lines was on day one, but after a few sessions became more familiar?

The Skew-T lines also get less terrifying with experience. There are too many local variables at any specific site so I hesitate to give blanket advice, but if you can learn to read a Skew-T diagram, you can apply that information and set expectations for the day. Does the Skew indicate that it will likely overdevelop by one in the afternoon? Get out to the hill early to enjoy a morning cook and early XC. Does it show that the day is super inverted with weak thermals? Maybe it is a great day for a hike-and-fly!

Become a Student for Life

Real talk time—reaching the 250 flights needed for a P4 rating is not indicative of a need to stop learning. If anything, once pilots reach this point, it is time for self-reflection to ensure they are safely able to navigate intermediate syndrome. None of us are birds, so none of us are experts at free flight. If anything, the ability to spend my life always learning something new makes me all the more excited to keep learning. With so many disciplines and so many locations, free flight never gets stale.

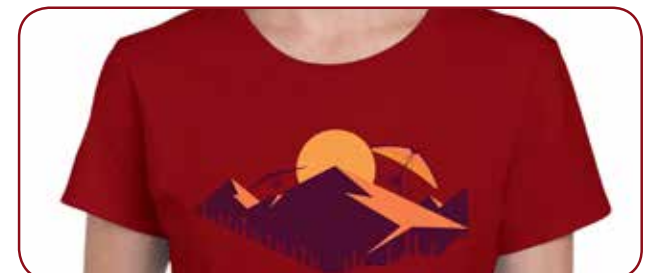
The time I took off changed the course of my life and the way I view flying. I interacted with pilots of all experience levels, flew new sites, and experienced many different conditions. These opportunities changed my perspectives and helped me grow as a pilot—I cannot stress enough the importance of diversifying one's flying from the local hill. Besides flying, I was exposed to beautiful cultures and befriended people from all walks of life. This sport offers a unique opportunity to grow as a pilot, a student, a mentor, a friend, and a global citizen. All the opportunity is there if you're willing to chase it!



ABOVE Author Lindsey Ripa launching a 14m Little Cloud from Sarangkot launch in Pokhara, Nepal. Photo by Tyler Burns.



All this and more at USHPASTORE.com



FREE FLIGHT T-SHIRTS

Show your pride of wing with these bold, graphic HG & PG designs – available in both men's and women's styles. Cardinal red for hang gliders. Sapphire blue for paragliders. Bi-wingual? Get one of each!

\$14.95

FREE FLIGHT LUCK CHARMS

For your necklace, keychain, or earrings (buy two for a complete pair). Choose Hang Gliding or Paragliding. Silver/zinc alloy on black cord, approx 1" x 1".

\$19.95



FLEECE BEANIES

Top off your look with this warm fleece beanie embroidered with the USHPA logo. Keep your ears warm on the ground or in the air. Available in solid black or red.

\$19.95



GREETING CARDS

"This is Flying, This is Freedom." Send these cards to your friends and family. Choose from hang gliding or paragliding. 9.5" x 4.25" cardstock, 10-card pack.

\$19.95



SOFT SHELL FLIGHT JACKETS

Durable Marmot jackets are water-repellent, windproof, and breathable. Features include stand up collar with zipper chin guard, zippered chest pocket w/ headphone port, zippered hand pockets, and LYCRA bound cuffs. Available in gray for men's and black for women's. Embroidered USHPA logo on the front, "U.S. Hang Gliding & Paragliding Assn" on the back.

\$149.95



ABOVE USA's Ivanov hits the plate. Photo by Luis Paredes.

Pan-American Cup 2020 [contributed by PEDRO TIRADO]

Paragliding Accuracy League kicks off in Ecuador and Colombia

The FAI Cat 2 Pan-Am Accuracy Cup 2020 circuit kicked off to a solid start from February 21 to 23 in Paute, Ecuador (Stage 1), and February 28 to March 1 (Stage 2) in Piedechinche, Cauca Valley, Colombia. Forty-four pilots from nine nations, five of them in the top 100 world ranking, competed for the podium in each stage, as well as ranking points for the PGAPC circuit.

Teams from Argentina, Chile, Cuba (their first-ever foray into international PG Accuracy landing competitions), Colombia (with top 100 pilots Daniel Monsalve and Felipe Arboleda), Ecuador, French Antilles (top 100 pilot Samuel Sperber), Poland, and three pilots from the U.S. completed 13 challenging rounds of competition between both stages. The next two stages, unfortunately, have currently been postponed due to COVID-19 restrictions but will be held in Argentina (La Calera, Cordoba) and Chile (Colina, Santiago).

The highlight of stages 1 and 2 was the debut

in the Americas of the only paraglider specifically designed for professional accuracy pilots: the Point by South Korean designer and manufacturer DaVinci Gliders. Pilots from Cuba, Ecuador, South Korea, and the U.S. competed with the Point which, although rated EN-A, is not a wing for beginner pilots given its active piloting and agile direct response to commands, similar to that of high B and C wings.

Three DaVinci team pilots from South Korea, 2019-2021 world female champion Soyoung Cho, world top-ranked female pilot Eunyoung "Joy" Cho (Soyoung's twin sister), and South Korea's female XC champion Dageom "Dana" Lee (who is trainer, mentor, and "big sister" to the twins) showcased the Point and what it was designed to do. The Team DaVinci pilots also provided a free accuracy clinic to female pilots interested in improving their competition accuracy landing skills. The clinic included classroom theory, in-harness simulated exercises, and hands-on

TOP LEFT Pilot registration. Photo by Lina Jurado.

MIDDLE LEFT Accuracy pilots visit the world's latitude 000 near Quito. Photo by Lina Jurado.

BOTTOM Stage 2 competitors. Photo by Lina Jurado.



TOP RIGHT World's top-ranked female Eunyoung Cho. Photo by Luis Paredes.

MIDDLE RIGHT Colombia's Nathalia Pinzon waits to launch. Photo by Lina Jurado.



ABOVE Stage 1 competitors. Photo by Lina Jurado.

RIGHT World Champion Soyoung Cho. Photo by Luis Paredes.

practice with immediate video feedback. The competition results validated the effectiveness of the training sessions, with three female pilots placing in the top ten of Stage 1 and four females in the top ten of Stage 2.

Conditions at landing were challenging at times, even for the world-class pilots. Conditions were rapidly changing from one pilot's flight to the next, with air switching from laminar to thermal, winds dropping from strong to zero, and changes in wind direction due to thermal activity. With pilots already committed to their final glide to target, the conditions made for a tough competition and resulted in lots of learning for all participating pilots.

Females Juliana Noscue (COL), Soyoung Cho (KOR), and Nathalia Pinzon (COL) took 4th, 5th, and 6th place respectively. With many women taking top spots and Jairo Mesa, a young Colombian pilot, taking part in his first FAI 2 PG Accuracy competition, the array of pilots competing showed that gender and age don't matter when it comes to doing well in this growing modality of paragliding competition.

PGA competitions are big in Asia and Europe and continue to grow in popularity worldwide. Though the Colombians dominated in the Americas and have the longest established circuit, pilots from Canada, the U.S., Ecuador, Chile, Argentina, and Cuba all have an eye on sending

national teams to the 2021 World Championship in Macedonia. Although newcomers to the scene, the Cuba team members acquitted themselves well and, along with a couple of pilots from Chile, are looking to unseat the reigning Colombians. For interested U.S. pilots, more information on the competition schedule and registration can be found at www.pgapc.org.



STAGE 1 WINNERS

1st Eunyoung Cho
(KOR – world top 10)
2nd Daniel Monsalve
(COL – world top 100)
3rd Diego Lopez
(COL – winner of last year's USA competition at HSB)

U.S. PILOTS

10th Mariyan Ivanov
19th Pedro Tirado
24th Paul Cooley

STAGE 2 WINNERS

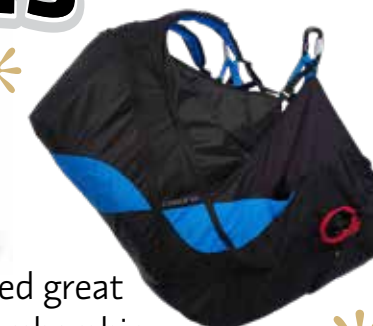
1st Felipe Arboleda
(COL – world top 100)
2nd Jairo Mesa
(COL)
3rd Eunyoung Cho
(KOR – world top 10 female)

Join or Renew in 2020 and automatically be entered in the...



USHPA

SKY OUT SWEEPSTAKES



Flytec, Ozone and Superfly have donated great prizes to encourage you to renew your membership. To see the full list of prizes and the official rules, visit www.usHPA.org/sweepstakes

Now that we have your attention, why should you renew your USHPA membership?

ADVOCACY. USHPA helps counter the threat of drones, works with federal land management agencies and partners to protect and expand access to federal land, lobbies for legislation such as tariff relief on glider imports, supports chapters with local challenges, maintains exemptions with the FAA, and much more.

SELF-REGULATION. FAR Part 103 is predicated on effective self-regulation by our community. USHPA provides safety standards, ratings, testing, certification and more so that the FAA doesn't regulate our sports.

PROTECTION. USHPA provides insurance benefits for instructors, recreational pilots, and landowners at sites nationwide. Most of our famous and historic sites require insurance to fly them.

SUPPORT. USHPA subsidizes instructor memberships and chapter renewal fees to help keep new students learning to fly and to maintain access to sites for large and small pilot communities. We also work hand in hand with our partners at the Foundation for Free Flight toward site preservation, safety and education, and other improvements for the free flight community.

USHPA members also get many other benefits:

- * *USHPA Pilot magazine*
- * *USHPA's free flight film festivals and lecture series*
- * *Pilot and instructor certification programs*
- * *Access to flying sites*
- * *Ability to vote for representatives and comment on policy changes*
- * *ExpertVoice pro deals for H3/P3+ members, offering up to 65% discounts on top products*
- * *Other partner benefits (hotels, rental cars, flight associations)*

By renewing your membership, you're helping USHPA advocate for our sports as we have since the 1970s. We look forward to continuing to support you both on the ground and in the air.



NO PURCHASE NECESSARY TO ENTER OR WIN. Sweepstakes sponsored by United States Hang Gliding and Paragliding Association, Inc. Beginning July 15th, 2020 and ending on January 1st, 2021. Drawing to be held on January 7th, 2021. Go to www.usHPA.org/sweepstakes on a computer or wireless device and complete and submit the entry form pursuant to the on-screen instructions. One set of entries per household. Four (4) winners will receive one of the main prizes. Odds of winning will depend upon the total number of eligible entries received. Open to the legal residents of the 50 United States and the District of Columbia. Void where prohibited by law. Sweepstakes subject to official rules available at www.usHPA.org/sweepstakes.

Sometimes dreams come true.

Hang Gliding in CHINA

by PETE LEHMANN



For years I had wanted to fly in China, but I was unaware of any local flying scene. Speaking no Chinese and intimidated by the socio-political barriers for traveling and flying there, I had long ago written off that particular fantasy. Then, a few years ago, I learned from Bobby Bailey, the designer of the Dragonfly tug, that he had been in China to assemble a couple of Dragonflies for a Chinese flight park. Two years ago, Vicki Cain, head of Moyes Australia, told me that she was organizing a flying trip to China to attend a small competition in a town north of Beijing. Learning of the trip too late to participate, I told her of my interest in going if she were to organize another one. Early last year she emailed me that she was doing so and asked if I would like to go. Hell yes!

Fortunately, the actual arrangements were quite simple. For some ten years now Moyes has had a commercial relationship with Longfei, the man who was the first hang glider pilot, instructor, and apostle of hang gliding in China. Longfei had established a flight school/club/grass airfield five hours north of Beijing in the town of Guyuan, and he had glid-



ABOVE Hanging out with the sheep as we wait for the wind. Photo by Vicki Cain.
OPPOSITE The main building at the Genghis summer camp. Photo by Pete Lehmann.

pressways around Beijing, one could easily have been in any developed western city. I have been to China twice in the previous 20 years, and the abiding impression I have taken away from the country is the unimaginably rapid rate of social, economic, and architectural change one encounters from year to year. China has, in many regions, become an astonishingly modern and prosperous country, an impression driven home for me during a 200 mph train journey to

Longfei

As a child, Longfei had seen pictures of a hang glider but had grown up where there were none. Ten years ago he took the momentous step of learning to fly. Having read all he could on the subject, he needed to find someone, somewhere, who would teach him. Speaking essentially no English, he sent a letter to the Moyes factory in Australia expressing his desire to learn and asking if he might visit the factory to do so. Moyes agreed, and

« I have been to China twice in the previous 20 years, and the abiding impression I have taken away from the country is the **unimaginably rapid rate of social, economic, and architectural change one encounters from year to year.** »

ers we could rent for the duration of our trip. Furthermore, a quarter-mile from the club's hangar and other facilities there was a curious hotel composed of repurposed shipping containers and small cottages where I could stay. All I needed was a visa and a plane ticket to Beijing.

I was met at the airport by Longfei and some of the Aussies from Moyes' group for the long drive to the flying site near Guyuan—it was an interesting introduction to the complexity of modern China. Departing the airport and driving on excellent modern ex-

Nanjing toward the end of my stay.

Departing suburban Beijing, we passed along and through a long stretch of the Great Wall looping along and through the precipitous Yan Mountains ringing the city to the north. Those mountains and the wall itself formed the historic Chinese defense against the nomadic Mongolian horsemen to the north, who inhabited a land dramatically different from that of the Han Chinese south of the wall. We would be flying over that startlingly different landscape, the edge of Inner Mongolia.

Longfei had the honor and adventure of being taught to fly hang gliders by the crusty Moyes patriarch, Bill. (One of the treats of my trip was listening to Greg Cain and Jonny Durand imitate Bill's old-school Aussie teaching methods: "Nah, mate, ya don't need a helmet unless you crash." Then, after the student has crashed, "Mate, if yer gonna be crashing, you'd best wear a helmet.") Longfei not only survived this tuition but was also taught to fly the Dragonfly tug by its designer, Bobby Bailey. Talk about learning at the feet of the gods.

Once equipped with the requisite skills, Longfei returned to China, acquired a Dragonfly, and built the school and flight park in Guyuan. He single-handedly brought hang gliding to China. Now, during Inner Mongolia's savagely cold winters, he travels throughout the warmer regions of southern China teaching, demonstrating, and assisting others in establishing hang gliding clubs. He is the Johnny Appleseed of hang gliding in China. Perhaps the long-term health and future of hang gliding lies in that vast market and geography.

The Moyes Connection

Longfei can be credited with creating the flight park that enabled me to realize my dream of flying in China, but it was the Moyes connection that got me there and provided much of the entertainment. Vicki Cain organized the whole affair and invited me to join a group consisting of two Aussie pilots, two Korean pilots, and world-class comp pilot Jonny Durand. Vicki came too, along with her husband Greg.

This group of Aussies were generally a gregarious bunch, and being isolat-

ed together in a non-English speaking environment created a most entertaining bond among us. Jonny and Greg are both talkative, smart, and funny. Lubricated by Chinese "vod-

« The landscape was quite different from traditional images of ancient and modern China—rice paddies, thickly vegetated mountains, enormous cities, and terrible smog. »

ka," the two were hilarious detailing some of their priceless adventures involving a motorcycle, a woman, and a Dragonfly visit to the windmills. I have seldom laughed as much as I did on this trip.

The Flying

The flying was curiously difficult despite the fact that conditions were generally very good and quite rewarding. The landscape was quite different from traditional images of ancient and modern China—rice paddies, thickly vegetated mountains, enormous cities, and terrible smog. Longfei's airstrip is located in a wide, grassy valley just beyond the moun-

tains north of Beijing. The region has large open areas and rounded grassy hills, so finding suitable landing areas was seldom a problem, although there were some valleys containing dense

powerline spider webs that you had to watch out for.

Located at nearly 5,000 feet above sea level, the climate was wonderfully cool at night and warm during the day, with cumulus clouds on most flyable days. Unlike lowland, urbanized China with its appalling pollution, this area was blessedly clean and clear. The only drawback was the presence of a persistently strong northerly wind on most days, which would try to drive us southward into the inhospitable mountains we had driven through from Beijing. As a result, much of our flying was into strong head- and crosswinds, and as we were flying king-posted gliders of

moderate performance, the flying was difficult, and the tasks short.

Notwithstanding the northerly winds, the soaring conditions ranged from good to excellent. We saw altitudes that ranged from 5,000 to 10,000 feet above the ground (and over 14,000 msl) and strong climb rates. Even if the flying had been poor, this trip would have been a highlight of my long flying career. How many people can say they flew over Genghis Khan's summer encampment?

The Contest

The occasion for our visit to China was Longfei's competition, which was intended more as an instructional event than a major contest. The local pilots were enthusiastic but inexperienced and were often flying low-performance single-surface gliders in challenging conditions. For them, it was as much a learning opportunity as a contest.

Having the world-class Jonny Durand present on a topless was an eye-opening experience for everyone. Jonny utterly smoked the field on the first two days before succumbing to nocturnal exuberance. Thereafter, he spent his days planning the daily tasks and conducting several cross-country/competition seminars for the pilots. The tows had the potential to be interesting as at high altitude the normally spirited tug lacked power; at one point, I was towed with a negative sink rate low over the ground.

The tasks were short, never longer than 43 miles, due to the limitations presented by the northerly winds and our hang gliders (we tourists were all flying clean Moyes Geckos of varying sizes). However, the flying was interesting and challenging with fighting the headwinds, and the generally good climb rates made it rewarding.

I had some excitement too when at one point I had to make a low approach to a turn point defended by a rat's nest of power lines, windmills,



TOP Pete and Jonny. Photo by Vicki Cain. **MIDDLE** Task prep with the group. Photo by Pete Lehmann. **BOTTOM** Hotpot dinner with the group. Photo by Vicki Cain.



LEFT Lined up and waiting to fly! Photo by Vicki Cain. **ABOVE** A little assist comes in handy when you're bringing your glider to launch. Photo by Vicki Cain.

« I am accustomed to the American hang gliding scene which is all too often a geriatric retirement sport of **old white guys**. »



and massive solar arrays on the lee side of a hill. The last day had little wind and equally little in the way of climb rates and altitudes; however, it still provided some excitement—I spent 20 minutes scratching a few hundred feet above a line of slowly rotating windmills, a disturbing place for anyone with a morbid imagination.

In the end, the contest was won by Jonghwan Kim, one of the two Korean pilots. He and all the other Asian pilots were something of a revelation to me. I am accustomed to the American hang gliding scene which is all too often a geriatric retirement sport of old white guys. The Chinese, in particular, are much younger, in their 20s and 30s for the most part, and they have the enthusiasm I associate with my early days of hang gliding. It was a pleasure to find myself in a warm, happy club environment with pilots who clearly relished the grand adventure that is hang gliding.

The awards ceremony that night was accompanied by the ritual grilled lamb on a spit, considerable quantities of the deadly rice liquor,

and a feeling of good international fellowship. Longfei handed out cash prizes to the top three pilots to further sweeten the evening. The cash was presented in the traditional red Chinese hongbao envelopes which are intended to bestow happiness and

blessings on the recipient. I gratefully received mine and considered myself indeed blessed to have enjoyed such a wonderful flying experience thanks to Longfei, his fellow Chinese pilots, and the Moyes connection. It was a remarkable trip. 🇨🇳



TOP Unique accommodations on our trip. Photo by Pete Lehmann. **BOTTOM** Pete and his Gecko. Photo by Vicki Cain.

Your expertise as a pilot has earned you exclusive access to top brands.

Your involvement with the United States Hang Gliding and Paragliding Association and your status as an advanced or master-rated pilot have earned you an invitation to join Experticity. It's an exclusive community where you can get deep discounts and insider information from brands like Kelty, La Sportiva, The North Face, Brooks Running, Diamondback Bicycles and many more you know and love. Because brands like these recognize that experts like you know more, do more — and deserve more.

Signing up is simple and free:

- Go to the members-only section of the USHPA website to learn how to sign up
- Join the USHPA team
- Complete your profile to lock in your access
- Start enjoying up to 70% off top outdoor brands



Zayden Hunlow stood at 19,341 feet, a little nervous. It might have been the lack of oxygen, the long hike to the summit, or something else, but his mind went blank. Hooking into a glider suddenly seemed like a foreign concept to him. But after a few deep breaths, he sorted out his gear just the way he had done since childhood. On launch, Zayden breathed again, choosing to turn off his mind in order to listen to his gut. It said “run,” and the 17-year-old ran as hard and fast as he could off the summit of Kilimanjaro. Right at the moment he was out of breath and could run no more, he was in the air and going up. Zayden was scared but quickly got comfortable, despite his bulky clothes which made it difficult to get into the harness. He was not as scared as his dad who launched shortly thereafter or his mom who saw the father-son duo off at the Salt Lake City airport 13 days prior.

WINGS OF KILIMANJARO

by BEN WHITE



CHRIS HUNLOW has been flying paragliders since 1998. In 2001, his first child, Zayden, came into the world, and Zayden was exposed to free flight from the day he was born. Chris taught his son some basics and would take him for tandem flights as any free-flying parent would. Siblings arrived and life trickled on in Draper, Utah.

In 2013, Chris learned about Wings of Kilimanjaro (WOK), a foundation run by Adrian McRae dedicated to funding the growth and maintenance of a school near Kilimanjaro. WOK operates on donations from paraglider pilots, arranging for them to fly off the summit of Kilimanjaro and funding the school as well as the expedition up Kilimanjaro with the donations. A midlife crisis struck the father of three, and something unknown grabbed Chris and told him, “You are climbing that mountain.” And though he did not do so in 2013, the wheels were in motion.

Like many parents raising teenagers, Chris did not have the time to stay in shape, the time to take off of work or life to climb a big mountain on the other side of the planet, or an extra \$10,000 to give away to a good cause. Still in touch with Adrian McRae, Chris learned that his skills as a tandem pilot could solve one of his problems. With a little bit of back and forth to see if it would work, the matter was soon settled. A generous tandem passenger would assist greatly with the fundraising part of the flight, and Chris would be the pilot for the 2016 WOK fundraising expedition. The funding would go to a good cause, somebody would get a once-in-a-lifetime tandem experience, and Chris would get to help too. Everybody felt like they were winning.

Now that there was money on the table and a commitment, Chris’s mind went spinning. He only had a few months to mentally prepare himself to travel to the other side of the planet, climb the highest free-standing peak in the world, and launch a tandem at over 19,000 feet. A myriad of things

raced through his mind, including how difficult it would be to launch that big of a wing in air that thin. Across all of the various routes up Kilimanjaro, only about 65% of people reach the summit, and a few perish in the attempt each year. Even if he and his passenger reached the summit, the weather

would have to cooperate so they could launch. Meanwhile, the Hunlow family would be going about life at home, knowing their dad was off on another adventure, which would weigh on his mind.

Chris managed to secure a standby ticket from an airline pilot friend.



TOP LEFT Chris Hunlow (left) and Zayden Hunlow (right). Photo by WOK crew with SunnySideUp Studios. **BOTTOM** Chris and Zayden—the early years! A tandem flight with his son in Pokhara, Nepal (2012) that Chris described as a turning point in his career. **OPPOSITE** The 2019 summit group at sunrise. Photo by a porter from Altezza Travel using equipment from Pedro Greig, SunnySideUp Studios.

« In the history of paragliding, only nine people had ever flown from Kilimanjaro, and **none had launched from the true summit.** »

Roughly a year later, exhausted after international air travel, Chris walked through the doors of the school that WOK had built as a result of their 2013 fundraising effort. The effect was life-changing, and suddenly his energy was renewed. After seeing the difference that the paraglider pilots had made in 2013, Chris was even more



LEFT Zayden and Chris at the entrance to Kilimanjaro National Park. Photo by Ryan Wilkes, Fly the Roof, NZ. **ABOVE** Night shot of kitchen tent. Photo by Ryan Wilkes, Fly the Roof, NZ. **BELOW** Zayden scoping out the mountain before heading out on the day's hike. Photo by Chris Hunlow.



determined to put his best foot forward and improve the lives of others by flying off Kilimanjaro.

He did put his best foot forward. Both of them, repeatedly. The higher he and his team climbed into the ever-thinning air, the more doubt trickled through his thoughts as reality began to set in. In the history of paragliding, only nine people had ever flown from Kilimanjaro, and none had launched from the true summit. Every day, somebody in their crew mentioned how difficult walking back down would be—the weight of not flying would be heavier than carrying the glider back down.

In order to reach launch shortly after sunrise in time to fly, the team began their summit push at 10 p.m. on the last night. Throughout the night, the group hiked slowly. The line of headlamps quietly chanted “poli poli,” Swahili for “walk slowly.” With the only foreseeable weather window being the following morning, it was time to get to work.

Climbing from 16,000 feet to 19,000 feet through the dark was not easy. The day before, during less than ideal weather, a group of some of the stronger crew members went to the summit to clean it up to make launching easier—they reported back that the last stretch was a “death march” and guessed that only about a quarter of the group would make it to the summit, let alone fly off. As the line of headlamps ascended, people from other groups were being carried down, too weak from the altitude to walk themselves.

Finally, after a long, cold night climbing the last stretch, the sun rose. At almost 19,000 feet, it was a sight to behold. However, the group was still about an hour away from the summit, and this was the only possible weather window to fly for the next week. The



TOP Kilimanjaro pokes out of the early morning clouds. Photo by Chris Hunlow. **LEFT** Zayden, with kids from the orphanage they visited the day before starting their trek. Zayden, Chris, and a few other WOK members gave away half of their donations this day, and enjoyed playing with the kids until sunset. Photo by Chris Hunlow. **RIGHT** Zayden on an acclimatization hike the day before summiting. Photo by Chris Hunlow.

group slowly hustled to the summit, got their gear ready, took a group photo, and prepared to launch.

It was not a smooth process launching from the summit. Chris had never launched at such a high altitude, and



his passenger had never tried paragliding before. However, they did get airborne. As the terrain dropped away, they were treated to the sight of the mountain they had just spent days scaling—Kilimanjaro casting a shadow over the clouds and jungle thousands of feet below. It was the ultimate sled ride. But it was still cold! Chris warmed his hands in his passenger's armpits for a little bit, and when he had regained the use of his hands, he decided to pull some brake. They had altitude to lose after all, and some circles and wingovers seemed like the best way to burn it off.

After about 45 minutes of flying, arrival at the landing zone was fast, and the wind was light and variable. After such a long hike and fun flight, Chris had to make sure his passenger could run a little bit more. Despite this being his first flight ever, the passenger aced it. Before Chris and his passenger could unhook from their magic nylon, Adrian had walked over and served them a cold beer. The simplest goal of the event, “enjoy a cold beer in the LZ,” had been achieved.

Unfortunately, half of the group did not have the ability to launch. The weather window closed for the day—

and probably the week. The rest of the WOK group decided to sleep near the summit and try the next morning. It was a hopeful gesture, but they opted to walk down as snow began to fall.

When the rest of the group collected themselves at the base of the mountain, their overall success was celebrated. Of the 28 pilots in the group, seven solo pilots and three tandems had been able to fly from the summit, as opposed to none in 2013. Everybody was able to visit one of the water stations they had specifically raised funds for. The school that was built during the 2013 fundraising efforts now had better access to clean water thanks to the team in 2016.

CHRIS RETURNED HOME, his teenagers grew, and life carried on. However, because of his participation in the 2016 event, Chris was on the invitation list for 2019. Chris wanted to bring his son Zayden, but Zayden politely declined, so Chris passed on the opportunity as well. If

he chose to go to Kilimanjaro again for another once-in-a-lifetime opportunity, he would miss his son's 18th birthday. Zayden would not have another 18th birthday, but Kilimanjaro would still be there. Zayden was just starting his senior year of high school, and he wanted to dedicate his time to finishing high school strong and spending time with his friends before graduating and moving onwards and upwards, and felt three weeks of travel would detract from that.

In January of 2019, while flying over the Colombian Andes, Chris got a text that made his eyes grow wide—Zayden asked if it was too late to change his mind about going to Kilimanjaro. Luckily, it wasn't, and Chris was all in. Preparation started that instant. The father-son team had nine months to pull together \$25,000 in fundraising to make the trip happen. Flying tandem off the highest free-standing mountain in the world would be one hell of a birthday present for Zayden, and Chris

was stoked to give it to his son.

Zayden would be a great tandem passenger. He had been flying with his dad his whole life and knew the drill. Zayden knew how to run smooth and strong and keep his legs down just in case they touched down for another moment before being truly airborne. However, despite being the best possible passenger for his dad, Zayden asked if he could fly solo. His mom Trista immediately said no, and Chris initially agreed. But Zayden's desire was there, and Chris realized it made no sense to shut down an opportunity for his son to grow his skill set. Chris relished the opportunity to help his son grow as a pilot and a person. After putting together a solid training plan and with much convincing, Trista was won over.

The gauntlet was laid down. Chris had been to launch and landing and knew exactly what it would take. He also had taught many people to fly in his lifetime and had the resources of the Point of the Mountain flying communi-

ty at his disposal. In order for Zayden to earn a solo flight off the summit of Kilimanjaro, he would have to have P3 skills, take a maneuvers course, and get all new gear while maintaining his

honor roll status in school.

As the weeks carried on, Trista noticed more dirt and rocks in the entryway to her home, as her husband and son now were spending four to

five days per week enjoying all that the notoriously gravelly South Side of the Point of the Mountain had to offer. As every experienced pilot knows, kiting is king. Zayden was tossed new



ABOVE Chris and Ryan Wilkes from Fly the Roof, NZ on their 2019 flight. **RIGHT** Flying above the clouds, searching for the LZ. **BELOW** A solo pilot in 2016, soaring off Kilimanjaro. Chris Hunlow (red jacket) sets up for a launch attempt. Photo by Clay Cook, Nadus Films. **OPPOSITE** A solo pilot from the 2016 WOK launch. Photo by Clay Cook, Nadus Films.





ABOVE Zayden coming in to land with Kilimanjaro in the distance. Photo by Sarah Stahlhut. **OPPOSITE** Zayden practices his kiting skills at the South Side, Point of the Mountain, Utah. Photo by Chris Hunlow.

challenges from friends at the hill, and every tug on a line grew his confidence at his home hill. From only being able to inflate, turn, and go, he quickly developed an independent skill set. With practice and guidance from other instructors, he could slide as long as he wanted, hold a wingtip on the ground through a conversation, and top land on a dime. Brad Gunnuscio donated maneuvers coaching over the water, and Zayden aced the recoveries from every deflation and stall Brad walked him through. Dale Covington loaned him a BGD Magic paraglider for the trip, and Cloud 9 provided a screaming deal on a harness and reserve to help support the cause. Between South Side and North Side sessions at the Point of the Mountain, plus mountain launch sessions, Zayden learned how to use his navigation instruments.

Summer evaporated with the Hunlow family's hard work. Zayden was working on becoming a competent pilot.

Meanwhile, Chris secured a tandem passenger and other donors to fund the trip. Trista helped Zayden with various projects and made numerous appearances at the flight park. She was not there to fly but to help her son sell breakfast burritos to other pilots—the proceeds went entirely to the Kilimanjaro trip. Watching her husband and son bond as Zayden honed his piloting skills helped Trista process and accept her son going on this huge adventure.

ON SEPTEMBER 15, 2019, Chris and Zayden pulled all of their gear plus 150 pounds of school supplies out of Trista's car and loaded it onto baggage carts at Salt Lake International Airport. After long hugs, the father-son team was off to Tanzania.

WOK members arrived one by one and two by two. The team was scheduled to begin their journey up Kilimanjaro on September 19. Chris, Zayden,

and a few other WOK members who had arrived early had plenty of time to be beaten in soccer and frisbee by the kids at a local orphanage. Team meetings were held to discuss the route, contingency plans, and all the details that go into preparing for a multi-day expedition to 19,341 feet.

The ascent was fairly straightforward. Though high, Kilimanjaro is not particularly steep—it is often described as a walk or a hike rather than a climb. The biggest challenge is the altitude, and, for pilots and passengers, the very real possibility of hiking down with the weight of disappointment between their ears and the ever-increasing weight of the glider on their back. A successful summit would be dependent on how well the group acclimatized, a factor that they could control. However, a good weather window would be critical to successfully fly off the mountain, which was not within their control.

For the most part, fortune smiled on the WOK team. Zayden developed a small cold on the third day up the mountain, but willed himself to health—he would not let a sniffle turn him around. That night, sniffing and not feeling well enough to drink water, he heard hail on his tent. For a week, the group moved slowly up the mountain. Pacing was critical—the physical exertion was never excessive, but allowing the body to rest and acclimatize to the altitude was crucial. The slow pace did give an idle mind time to wander. The question about the weather ran through everyone's mind. While the weather is important for everyone climbing the mountain (being trapped at a camp during a multi-day storm with dwindling food supplies is not a position anybody wants to be in), for the WOK team, it was paramount. A good weather window was the only way they would be able to launch.

On the seventh day, the weather looked promising. The team was in a good position to summit and lay down to rest quite early. They woke at 10 p.m. and began their summit bid on

the eighth day. In the cold dark, at 3:30 a.m., breathing thin air, and weary from the previous week, they could not see the invisible summit. With no end in sight, every step felt futile. Chris and Zayden felt like they were on a useless quest, putting one foot in front of the other trying to get to an unknown destination. To keep their spirits up, they began to crack jokes about how "easy" it all was and began dancing at each stop to try to lift the spirits of the others on their team. Finally, at 5 a.m. on September 27, the sun exploded over the horizon.

Fresh rays of sunshine gently warmed the faces of those facing east on the summit of Kilimanjaro. The sun

breathed new life into those who had felt futile despair an hour prior. The pilots and porters danced together, celebrating the summit and the weather conditions that blessed them. Harry, a new friend and pilot from New Zealand, gave Zayden a Maori necklace said to bring strength and prosperity. The celebration ended when the rays of sun crept around and began to illuminate the launch—it was suddenly "go time."

The conditions were not ideal, but they were good enough. People started launching one by one, and Chris was laser-focused on the task at hand. As a few people aborted their launches, Chris' confidence was at about fifty percent. Though focused on himself

and his passenger, he was still worried about his son. However, Zayden was tuning into his newly honed skill set, and his intuition said to launch. Twenty-eight minutes after the first person

**HUNLOW
FUNDRAISING FOR WOK**

\$15,000 raised to build, grow, maintain, staff, and supply a school in rural Tanzania.

SPONSORS
Purple Air
Goal Zero
Fortress Clothing
Topo Designs



KILIMANJARO

ELEVATION
19,341 feet

LAST ERUPTION
150,000–200,000 years ago

FIRST ASCENT
1889
Hans Meyer
Ludwig Purtscheller

MYTHOLOGY
A legend tells of ivory-filled graves of elephants on the mountain and a cow named Rayli that produces miraculous fat from her tail glands. If a man tries to steal such a gland but is too slow in his moves, Rayli will blast a powerful snort and blow the thief down onto the plain.

BELOW A once-in-a-lifetime shot. Father and son together on Kilimanjaro. Photo by WOK staff member Pedro Greig with SunnySideUp Studios. **BOTTOM** Sunset at camp, just two days before summit day. Photo by Chris Hunlow.



launched from the summit of Kilimanjaro, Zayden took to the air. Chris followed suit with his tandem passenger. Up until now, Chris had other options for him if Zayden chose not to fly by himself. Now it didn't matter—they were in the sky, cruising through the thin air.

Zayden was out front, so Chris punched the trimmers to catch up, and soon the three of them could speak without using a radio. Under canopy

and thousands of feet over the jungle, their conversation was brief. At trim speed, Chris and his tandem passenger were too fast to stay next to Zayden. The father-son duo turned a few circles around each other, and Chris accepted that he was just going to be faster and would have to leave his son's side. They made sure they were pointed in the right direction, and Chris took off toward the landing zone which remained elusive below the clouds.

Once Chris got out front to lead Zayden to the landing zone, he was overwhelmed with fear and the weight of this experience. What had he just done? He had let his son fly solo off the biggest mountain in Africa. Every “what if” raced through his mind, but as a father, not so much as a pilot. What if he lost radio communication with his son? What if Zayden got disoriented over the jungle and could not read his instruments in a panic? What if conditions made landing difficult? Chris felt like he was the recipient of the World's Worst Dad award.

Oblivious to his dad's anxiety, Zayden enjoyed his flight. Once he was in the harness and flying away from the summit, he took his time to soak it all in, flying in smooth air bathed in morning light above the clouds. The months of preparation, car washes, burrito sales, and South Side gravel in his shoes all paid off. He was stoked and made it over the designated landing zone without an issue. He could see through the clouds below which were not too thick. Despite still being early in the day, conditions had picked up, and the air did not make it easy for Zayden to land. Smooth lift prevented his descent, and he flew around looking for air he could descend in. After a few circles and passes back and forth to avoid lifting air, Zayden's feet touched the

ground. There is now a rumor in Tanzania about how pleasant Zayden makes landing a paraglider look. Chris and Zayden immediately called Trista to let her know they had made a successful flight off the summit. She already knew—she was tracking their Garmin InReach every moment she could.

They quickly traded their large puffy coats appropriate for cold temperatures at high altitude and dirty clothes reeking of sweat from hiking up the mountain for clean shorts and t-shirts. Now that the WOK group was back on the ground and showered, the real work began. The Hunlow family had raised \$15,000 for the WOK cause and brought 150 pounds of school supplies from the North Side flight park to the Kilimanjaro landing zone.

With the group recouped and cleaned up, the members of WOK jumped in vehicles and bounced along dirt roads for three hours, driving to see the school they were raising funds for. In the region, a school not only provides children with an opportunity to learn how to read and write, but is also a place to find clean drinking water and food. Some students get their only meal for the day while at school. Prior to 2013, there was no school and 90% illiteracy in the region. The first WOK fundraising effort built three classrooms and desk space for approximate-

ly 100 students. A single teacher served all 100 students. Each year after that, more improvements have been made through the WOK fundraising efforts. Classroom space, desks, more teachers, and more curriculums have been added every year. The 2016 WOK event raised enough funds to build a brick residential building for the headmaster and her family in addition to other school improvements.

In 2019, Zayden gave away soccer balls—upon doing so, all hell broke loose as excited students ran amok playing with this new gift. Chris and Zayden looked at each other, wondering what they had just done. But the headmaster, village elders, and other teachers managed to corral the excited students and quickly restored order. The children gave the WOK group a tour of their school. At every opportunity, children touched Zayden's skin and hair—they were astounded at how light it was compared to theirs. After the tour of the school and lunch with the children and teachers, the group left wearing their newly acquired traditional Maasai clothing which the school gave them as a token of gratitude for the massive fundraising effort. The WOK group bounced in their seats as the cars drove over rough roads away from the school, and Zayden took the time to reflect on how visiting such

a place impacted him. Clean, running water suddenly felt very precious. Food in the fridge that his mom and dad filled should never be wasted. He also got to feel the deep impact of helping others. Chris got to watch his son have these realizations.

Chris and Zayden finished their trip by doing a little bit of sightseeing. Zanzibar seemed like a fun place to celebrate Zayden's 18th birthday, so they hopped on a short flight from mainland Africa to the Tanzanian trading post. Some island time contrasted nicely with the time they had spent high on a mountain, and seeing an ancient trading port was a highlight for the landlocked Utah duo.

When the two wearily walked into their house back home in Utah, they both finally realized what an amazing bonding experience the trip had been for both of them. Chris got to pass on a skill set to his son and they both got to overcome a huge challenge. Traveling with a partner, any partner, always tests a relationship—in this case, the two grew closer as they traveled farther away from home. After they dropped their bags and got a glass of water, Zayden's two younger sisters unceremoniously asked him for a ride to their friend's house. It was back to business as usual, but with a new world perspective. 🌍



Dedicated to *Justin Kyllö*, amazing father, husband, and human being.
A true WOK supporter who gave everything to this calling.
Blue skies brother.



Ice Road Flyers [by DAVID DYBSAND]

Pilots gather to fly in the land of 10,000 frozen lakes

ABOVE Towing on the ice roads during the Winterfest Fly-In. Photo by Gerry Uchytel.

« The ice is thick enough for vehicles to drive on, so for the Winterfest Fly-In, tow roads are plowed in every wind direction. »

unique about this fly-in? Well, other than the fact that it's hosted in the dead of winter, we're also hanging out on and launching pilots from the frozen Lake Pepin.

Lake Pepin is a naturally occurring lake on the Mississippi River on the border between Minnesota and Wisconsin. The lake is located in a valley carved out by the outflow of an enormous glacial lake at the end of the last ice age. This part of the Mississippi River is surrounded by 500-foot-tall vertical cliffs, making it a ridge soaring pilot's dream come true. However, the launch sites that exist here are not for the faint of heart, and a pilot must have a minimum of a P4/H4 rating, a special cliff launch sign-off, and the ability to spot land back up on top. The

"landing field" below (otherwise known as the Mississippi River) is not recommended, making it a challenging place to accumulate airtime. In 2016, I started Eagle Hang Gliding to start taking advantage of these topographical features. We've developed a boat platform towing system which offers introductory tandem flights and enables visiting HG/PG pilots to access over 100 miles of soarable ridges.

While access to this area during most of the year is limited to higher-rated pilots, in the winter, the 21-mile-long Lake Pepin freezes solid with ice depths of about 2 feet, making it safer for lower-rated pilots to explore these sites. The ice is thick enough for vehicles to drive on, so for the Winterfest Fly-In, tow roads are plowed in every wind direction. Using truck platform towing on these ice roads, paraglider and hang glider pilots are able to gain access to ridges along the lake. The best part is that the landing areas literally become as big as the lake.

Though the shorter winter days and cold temperatures normally keep folks in hibernation here in Minnesota, during the Winterfest Fly-In, we all rally for a fun and educational get-together. Come join us next year and dip your toes into the Midwest winter flying scene! 🇺🇸



ABOVE LEFT Marilyn Ivanov coming in to land.

ABOVE RIGHT Slide it in! Doyle Johnson landing on the bare ice.

BOTTOM Towing on snow, you swap wheels for skis! David Dybsand towing up.



PHOTO BY MARZENA FRYC-GIBSON

Winter Flying Partner [contributed by JIM GIBSON]

A little lift from a friend

The lift on the ridge is sparse, and the pale winter light is gently glowing as the sun approaches the boundary of water and sky. The dune grass landing zone is almost 3 miles to the north, and with Lake Michigan's water level at record highs, there is no place to land between here and there. In the past few months, sliding land from the pounding high-water waves has carried mature trees downhill to the beach to form a tangle of trunks and branches at the water's edge. From my altitude 100 feet above the bluff, even with the quartering tailwind, it will be a gamble to reach the only safe area for landing.

For the past half hour, I had hoped the 35-degree Fahrenheit water would give birth to a couple of decent lake thermals in the 28-degree Fahrenheit air that would push me high enough to make it to an inland field about a mile away. But hoping for good fortune isn't enough on this passive evening and making one more pass along the highest part of the ridge would probably offer little gain. The southwesterly wind is setting with the sun so there is no alternative but to pull the VG, tuck my arms, and point my toes. It's time to go!

The first gap in the ridge is a short one, but it almost always charges a loss of altitude as the toll fee to get across. The glide to the other side is quick, but now the treetops are close and the water only 150 feet below me with 2 miles to go.

A light positive bump helps for a few seconds, but that is followed by longer sinking—turning back to the small lift area doesn't feel like a smart move. Landing on the side of the bluff is a backup plan, but there are few open zones larger than my glider. My position is above the ridge edge but not by much, and my variometer is silent. Zero is better than negative so I focus on efficiency. I still have a mile and a half to go, and the waves are audible as I am now 100 feet above the water. The wave activity is there, but where is the wind that made them? The velocity seems to be about 5-7 mph with small sporadic lake thermals for short-lived boosts. There is still a mile to go, and it definitely looks like I am on final glide so I contour the edge just above the ridge face.

Then I see her. She has joined me occasionally on previous flights in stronger conditions. This time, though, she is not in the air and carefully watches as I fly by at minimum sink. I look back, and she launches. Her glide speed is faster than mine, and she quietly passes my left wing at my altitude and then banks to the right to get directly ahead and slightly above me. We seem to have the same destination for a moment, but then she angles out over the lake ... slowly going up!

My decision to follow is almost instinctual, but I have some concern because the water below

doesn't show the texture that typically indicates the presence of a lake thermal. I must trust my fearless leader. Five seconds later my variometer offers a few light beeps of reassurance. She is in a flat 360 just above me, and I do the same. She flies with no urgency, and I wonder why she is so comfortable flying with a partner like me. We understand our differences and respect each other with a polite distance. Her climb rate is better than mine, but together we work our way upwards and slowly ease our way back to the ridge, carefully rising above the trees. The thermal is weak but coherent, and we climb with minimal drift. I no longer hear the water, now 200 feet below, and I tighten my bank angle for improved centering on the small core. She receives my full concentration as we slowly lift in the same buoyant spiral. The landing area is still a half-mile away so the most important direction is upward.

The sun is a soft glowing torch at the horizon, and a half-moon is smiling down upon the two evening aviators. At 600 feet above the beach, the thermal cools, and I head out over the water to see if there are any more treasures to discover. She follows me but from a naturally tactical position above and behind me by 50 feet. The thermal search doesn't offer me any opportunity, but I still have plenty of height from the last climb to provide what is needed to reach

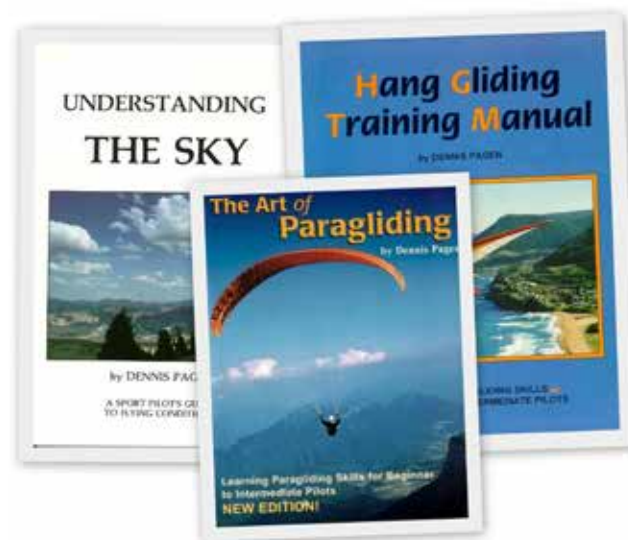
WINTER FLIGHTS There is a mixed blessing with winter here in coastal northwest Michigan. Summer flying is mostly pure ridge lift. Winter offers lake thermals that are sometimes roaring like freight trains but more often are soft rising whispers. Lake Michigan stores its summer heat well into December and, in recent years, freezes along the immediate shoreline even through January and February. This extensive "warm" water mass offers thermal opportunities for soaring pilots to break away from the bluff and attempt inland cross-country flying, but there isn't much land heating with the sun's low angle and reflective white terrain, so the distance is not impressive. However, even short winter flights can be challenging mini-adventures. One certainty is that on every winter flight, eventually the wind chill steals your body heat, and landing becomes mandatory sooner rather than later.

the landing zone. We both head north along the widening shoreline. I finally relax with a deep inhalation of the dense wintry air, and for the first time since launching, I realize how cold my hands are.

She banks to turn in lift in front of me. The air along the ridge is still gently lifting but barely sustaining for my glider. I turn where she did and find nothing. She is already 100 feet higher and circling in that invisible sweet spot that I couldn't catch. She is large, even for a female and her wingspan creates an impressive silhouette as she circles to the moon. I thank her for her guidance this evening and head to the grassy dune landing zone. I look forward to sharing the air with this beautiful young bald eagle again soon. 🦅

« I still have a mile and a half to go, and the waves are audible as I am now 100 feet above the water. »

FLIGHT LOG



www.DENNISPAGEN.com

Sport Aviation Publications
PO Box 43, Spring Mills, PA 16875
pagenbks@lazerlink.com | 814-404-9446

Pick up these hot titles by
DENNIS PAGEN





ABOVE Sharing convergence with an Andean condor.

Convergence Lift [contributed by HONZA REIMANEK]

Learning the flow of your local sites

This article was originally published in Cross Country Magazine.

It is a big valley crossing. The thermals that you are enjoying on the upwind and sunny side of your current ridge are not giving you the height to make the crossing on glide. In fact, they are only letting you get about 200 meters above the ridge at best, even if you search out in front. Each time you top out in one of the thermals, you see that you are near the top of the convective boundary layer and that above you the air is cleaner. Maybe 1,700 meters above sea level is as high as you will get today.

Staying up on this side of the ridge is fine but soon loses its challenge. You have tried the valley crossing in the past, with no success. In fact, it entailed gliding through some moderately turbulent, fast sinking air which then resulted in landing in strong valley wind. So why go over the back again today? Why cut an enjoyable flight short? Because, if somehow you manage to cross the big valley and subsequently get up on the other side, you will fly to a place you have never flown before—where few have flown. If you can do that, you might just fly to a place no one has ever flown before! This is a challenge that makes you decide to go over the back if you get 200 meters over the ridge again. Being a thinking type, you decide to venture further up the ridge before trying the same wide valley crossing that has failed

you several times prior. In the past, the valley has been dismal as far as thermals are concerned. It is a long shot.

Sure enough, soon after you commit, it begins to feel like a mistake. Less than a kilometer in the lee and you are back to ridge level. There is certainly no turning back now—you're stuck in choppy, sinking air. Actively flying downwind in the lee you quickly lose another 200 meters. Then, unexpectedly, the sink decreases, as does the tailwind, and your vario begins to chirp. It is not just a temporary respite from the sink either—something here is going up, and it's going up quite fast! And on the base of the shady lee slope of all places! You begin to circle. This is the strongest thermal you have had all day. You take it up to 2,100 meters, leaving the hazy air below. You finally cross the big valley and get a chance to fly new terrain. What luck to have found such a strong thermal in such an odd place.

Curiosity has you make a similar flight just days later. Sure enough, the same area, well in the lee and at the valley's edge, gives you the same great lift. In fact, it turns out that this region of the valley seems overly abundant with thermals even in the late evening, long after it has fallen into the shade. You begin to realize what is going on.

The missing piece of the puzzle is convergence lift. This form of lift is often presented as the third form of lift, the first two being

ridge lift and thermal lift. It is important to realize that natural phenomena are often best described on a continuum rather than as discrete categories. We know that ridge lift and thermals can occupy the same space. In a similar fashion, thermals and convergence tend to be found together. Even areas of widespread convergence will have more buoyant plumes embedded in it.

Convergence can be found at many different scales. The largest areas of convergence can be hundreds of kilometers wide, as is the case in a region of low pressure. On the small end of the spectrum, buoyant slope flows making their way up various sides of a mountain tend to converge at the summit or ridgeline, thereby increasing our chances of finding lift there. But perhaps the most elusive types of convergence are those found on a scale between the two abovementioned extremes. A great example of this is when the topography channels two distinct valley winds onto a collision course. However, the topography has to be just right or the winds might experience only a confluence and continue snaking along merrily in a horizontal fashion. For convergence lift to form, the topography must minimize escape options for the colliding air, so it has nowhere to go but up. How far this air goes up is still dictated by the day's environmental lapse rate. Nonetheless, an area of strong convergence can locally cause a significant bulge in the convective boundary layer top. As a fortunate pilot topping out in such a convergence, you would see clear air to both sides.

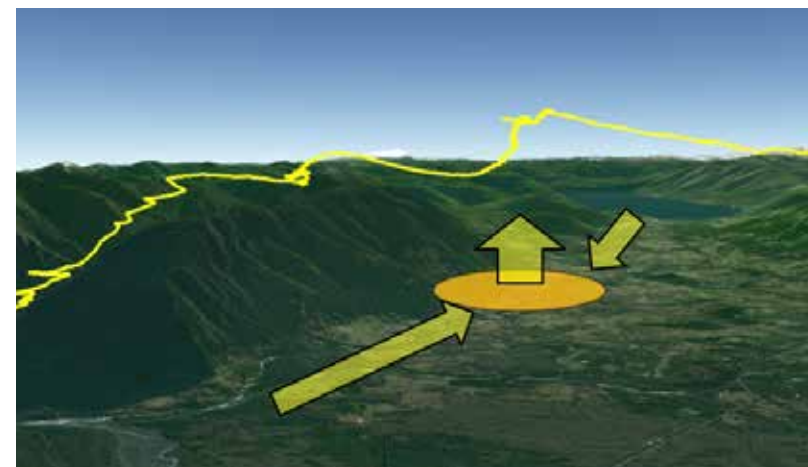
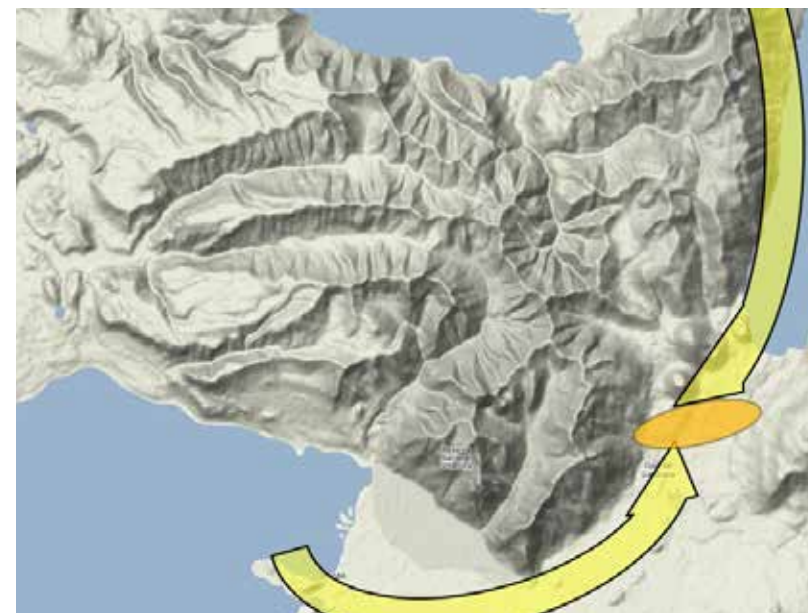
Locating this type of convergence is not trivial. Study of topographical maps can hint at probable regions where convergence might occur, but more often you just stumble upon one. Driving along valley floors and being conscious of the direction and strength of the valley wind can yield clues to what might be happening in the sky above. Noticing that the valley wind decreases in strength and then reverses direction as you drive through the valley might indicate that you have just driven through the base of the convergence occurring overhead. If you make this drive on a regular basis and the valley wind becomes calm in the same general region, then it is worth keeping this in mind to test for when you are airborne. Even if you do not get into the convergence because you arrived too low, you can land in light winds rather

than dealing with a strong valley wind landing. Sometimes the distance between strong valley wind and the region of calm air below the convergence can be less than 1 kilometer.

If airborne, it is important to recognize that you have indeed stumbled into convergence lift and try to exploit your fortunate predicament for all it has to offer. If the convergence occurs frequently and if you are not the first to pioneer the flying site, then it is more than probable that the local pilots have already identified it. The observant locals have probably even learned how the convergence evolves throughout the day and on what types of days it is most likely to set up. If you are fortunate enough to exploit a convergence then you just might get a shot at an XC flight that would have been short of impossible otherwise. 🇨🇪

TOP Bird's-eye view of the region of convergence.

BOTTOM Track log showing where the convergence was encountered.



Due to recent events surrounding COVID-19, most USHPA-sanctioned events have been canceled. **Please contact event organizers** regarding the status of events that remain on the calendar as these are subject to postponement or cancellation depending on how the pandemic progresses.

2020 CALENDAR Submit listings online at ushpa.org/page/calendar. A minimum 3-MONTH LEAD TIME is required on all submissions. Tentative events will not be published.

JUL 10-12 > INKLER'S POINT FLY-IN Inkler's point, Chewelah, Washington. This will be the 4th Inkler's Point Fly-In! The first 3 have been great - especially last year's with spiffy conditions each day! Dry camping adjacent to the BIG LZ included + dinner on Saturday and breakfast on Sunday (Total \$50). Event T-shirts will be available on site for an additional fee. USHPA Membership is required as Inkler's Point is an insured flying site. We'll have 2 launches on Inkler's to use as well as 4 other nearby flying sites with 5 launches (verticals from 500' to 2600')! | gonehanggliding@gmail.com, goneparagliding@gmail.com, www.centeroflift.org, Inkler's Point Fly-In on Facebook

JUL 25 - AUG 1 > TATER HILL OPEN Boone NC. The THO is a race to goal format, and uses a handicap system for scoring. We have a sport and an open class. For \$225.00 you get rides up the hill to launch, retrieve, a nice t-shirt, a great dinner, and hopefully prize money. This will be the 16th event. In past years we have flown most of the time. There will be a couple practice days prior to the event. Check out the website or contact Bubba Goodman at 828-773-9433 | Flytaterhill.com

AUG 1-2, OCT 10-11 > MOUNTAIN FLYING/SITE PIONEERING CLINIC Utah flying sites. Learn how to pioneer a site, fly the Mt. sites in Utah, improve your safety in the mountain, quickly and appropriately plan the best approach to any landing zone, weather tendencies, patterns and considerations. Learn how to visualize air flow in the Mountains. | Twocanfly Paragliding, Ken Hudonjorgensen 801-971-3414, twocanfly@gmail.com, twocanfly.com

AUG 20-23 > TANDEM PG CLINIC Point of the Mountain, Draper, Utah. For T1 or T3 certification. To apply, email Blake at blakepelton@gmail.com.

AUG 29 - SEP 5 > HURRICANE OPEN 2020 Henson's Gap, Tennessee. USHPA Sanctioned PG Race To Goal XC Nationals Competition | Register Dates: January 1 - August 29, 2020 | More Info: info@tnfly.com, <https://www.flying.camp/2020-east-coast-paragliding-nationals/>

SEP 4-7 > ROCKY MOUNTAIN SWIFTS FLY-IN 2020 Villa Grove, Colorado. This is an event in celebration of all the women in free flight, men are welcome! Come join us in scenic Villa Grove, Colorado for high mountain flying and other shenanigans! There is a public event on facebook where all details can be found. Any questions, email me! | Search "Rocky Mountain Swifts Fly In 2020" on Facebook!

SEP 4-7 > 30th ANNUAL PINE MOUNTAIN FLY-IN Pine Mountain, Bend, Oregon. The 30th annual Pine Mountain Fly-in will be held September 4-7, 2020 near Bend, Oregon. Pilots from near and far gather to enjoy morning, midday, and glass-off flights, and the evening gatherings that ensue. <http://www.desertairriders.org>

SEP 11-13 > EAGLE PARAGLIDING PINE MOUNTAIN CLINIC Ojai, California. Eagle organizes clinics at Pine Mountain behind Ojai. Two local legends Tom Truax a.k.a. "Sundowner", and "Diablo", Tony Deleo each set the California state distance record from this site back in the 90's. September is our favorite month to do clinics out there, and we held a clinic there years ago where a pilot flew 50 miles on his first Cross Country flight. We followed the Team Flying strategy we share at our clinics and our tours with a group of pilots on this flight. Cost is \$795. More Info: <https://paragliding.com/shop/services/clinics/thermal-xc-clinic/>

SEP 19-21 > THERMALING/WINGLISTICS CLINIC Utah flying sites, 474 E. Tonya Dr. Sandy, Utah. Learn thermaling efficiency, reading and deciphering terrain features for thermal triggers and reservoirs, understanding cumulous cloud formations and what they tell us about the type of thermals that are feeding the clouds, recognizing cloud formations that are useful and safe for us and those that are not, working cloudbase, weather related specifics that determine favorable thermaling conditions, launching and landing in thermic conditions, learn your wings language and what it is telling you. | Ken Hudonjorgensen, 801-971-3414, twocanfly@gmail.com, twocanfly.com

SEP 25-27 > KITTY HAWK 48TH ANNUAL HANG GLIDING SPECTACULAR Kitty Hawk Kites is proud to host the 48th Annual Hang Gliding Spectacular and Air Show! Join professional hang gliders, fans, and families at Jockey's Ridge State Park for this Outer Banks tradition. This event is the longest running hang gliding competition in the world! More Info: <https://www.kittyhawk.com/event/hang-gliding-spectacular/>

SEP 28 - OCT 3 > RED ROCKS FALL FLY-IN Richfield, Utah. Paragliders and Hang gliders from all over the world. We are expecting over 250 pilots this year. \$80.00 for the whole week. Plus \$10.00 per ride up the mountain. Flying Cove Mountain, Monroe Peak, Mt Edna, Parker Ridge. Emphasis at the Red Rocks is on low pressure fun, safe, and enjoyable flying. More Info: www.cuasa.com | Stacy Whitmore, 435-979-0225, stacy@cuasa.com | Jef Anderson, 435-896-7999, jef@cuasa.com | Jon Leusden, 719-322-4234, jonathon@cuasa.com

OCT 10-12 > EAGLE PARAGLIDING OWENS VALLEY CLINIC Bishop, California. The Sierra's and White mountains provide excellent thermal and XC opportunities. A variety of launch locations, means we will make a move to the launch which matches our forecast for the day. We can work as a group and team fly here as well, and put out some big distance numbers. The State distance record is held from this area by Dave Turner. The area is world famous and worth a trip in the fall or spring for some classic flying, and big distance opportunities. Cost is \$795 for 3 days. More Info: <https://paragliding.com/shop/services/clinics/thermal-xc-clinic/>

CLASSIFIED Rates start at \$10.00 for 200 characters. Minimum ad charge is \$10.00. **ALL CLASSIFIEDS ARE PRE-PAID.** No refunds will be given on ads cancelled that are scheduled to run multiple months. For more info, visit ushpa.org/page/magazine-classified-advertising

SCHOOLS & INSTRUCTORS

GEORGIA > LMFP > provides unmatched service & attention to students & visitors. We have over 40 years of experience making dreams of flight come true on Lookout Mtn & can't wait to share our passion with you. Visit www.flylookout.com

HAWAII > PROFLYIGHT PARAGLIDING > Call Dexter for friendly information about flying on Maui. Full service school offering beginner to advanced instruction, year round. 808-874-5433 paraglidemaui.com

NEW HAMPSHIRE > MORNINGSIDE > A Kitty Hawk Kites flight park. The Northeast's premier hang gliding and paragliding training center, teaching since 1974. Hang gliding foot launch and tandem aerotow training. Paragliding foot launch and tandem training. Powered Paragliding instruction. Dealer for all major manufacturers. Located in Charlestown, NH. Also visit our North Carolina location, Kitty Hawk Kites Flight School. 603-542-4416, www.flymorningside.com

NEW YORK > SUSQUEHANNA FLIGHT PARK > 40 acre park. Awesome training hills with rides up. 600 mountain take off. Best facility in NY to teach foot launch. New and used WW gliders in stock. www.cooperstownhanggliding.com

NORTH CAROLINA > KITTY HAWK KITES > The largest hang gliding school in the world, teaching since 1974. Learn to hang glide and paraglide on the East Coast's largest sand dune. Year-round instruction, foot launch and tandem aerotow. 1902 Wright Glider Experience available. Dealer for all major manufacturers. Learn to fly where the Wright Brothers flew, located at the beach on NC's historic Outer Banks. Also visit our NH location, Morningside Flight Park. (252) 441-2426, 1-877-FLY-THIS, kittyhawk.com/hang-gliding

TENNESSEE > LMFP > provides unmatched service & attention to students & visitors. We have over 40 years of experience making dreams of flight come true on Lookout Mtn & can't wait to share our passion with you. Visit www.flylookout.com

TEXAS > FLYTEXAS TEAM > training pilots in Central Texas for 25 years. Hang Gliding, Paragliding, Trikes. Hangar facilities Lake LBJ, Luling, Smithville www.flytexas.com 512-467-2529

VIRGINIA > BLUE SKY > located near Richmond, year round instruction, all forms of towing, repairs, sewing, tuning... Wills Wing, Moyes, Icaro, Aeros PG, Mosquito, Flylight, Woody Valley. www.blueskyhg.com

CLINICS & TOURS

BAJA MEXICO > La Salina Baja's BEST BEACHFRONT Airsport Venue: PG, HG, PPG: FlyLaSalina.com. by BajaBrent.com, He'll hook you up! Site intros, tours, & rooms. bajabrent@bajabrent.com, 760-203-2658

PARACRANE Paragliding Tours 2020 > Fly Costa Rica, Brazil and Europe with veteran tour guide Nick Crane. Small groups, flexible schedule | Costa Rica-Jan 21-31 & Feb 4-14 | Brazil-Feb 19-29 | Germany, Austria, Slovenia, Italy June 1-10 and Sept 8-18 | France, Italy, Switzerland Sept 19-29 | visit: www.costaricaparagliding.com, contact: nick@paracrane.com

FLYMEXICO > Valle de Bravo for Winter and year round flying tours and support. Hang Gliding, Paragliding. Guiding, gear, instruction, transportation, lodging. www.flymexico.com +1 512-467-2529

PARTS & ACCESSORIES

GUNNISON GLIDERS - X-C to heavy waterproof HG gliderbags. Accessories, parts, service, sewing. Instruction ratings, site-info. Rusty Whitley 1549 CR 17, Gunnison CO 81230. 970-641-9315.

SERVICES

LMFP has a full glider shop and sew shop for all pilot needs. From annual inspections to bigger fixes, we have you covered. Visit www.flylookout.com or call 706-383-1292

WINGS & HARNESES

LMFP has the largest fleet of new & used wings and is one of the largest Wills Wing dealers in the US. With GT Harnesses just next door, we deliver top quality custom orders on your trainer, pod, or cocoon. www.flylookout.com

Fly beyond! with the Oudie

- Touchscreen
- Color moving map
- Highly customizable
- Thermal assistant

naviTer
Flytec.com • 800.662.2449

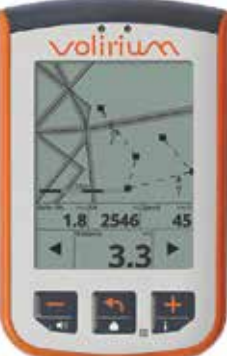
Para Supply.com
Your truly direct online shop

Possibly the world's lightest flying boots!



\$179
ONLY 660g
Size EU42

volirium
THE FUTURE



Touchscreen • Full Connectivity
Smart Software Updates

800-662-2449 www.flytec.com

Ratings Issued March & April 2020

RTG	RGN NAME	STATE	RATING OFFICIAL
H1	1 Ian Clark	OR	Eric Ollikainen
H1	2 Adam Hao Su	CA	Robert B. Booth
H1	2 Jeff Morgan	CA	Robert B. Booth
H1	2 Jeffrey Shannon	CA	William C. Dydo
H1	4 Fernando Diaz	FL	Josh Patrick Laufer
H1	4 Jan Tomastik	VA	Wolf Gaidis
H1	5 Laurie Lynn Bottum	NY	Travis Sixberry
H2	1 Ian Clark	OR	Eric Ollikainen
H2	2 Adam Hao Su	CA	Robert B. Booth
H2	2 Jeff Morgan	CA	Robert B. Booth
H2	2 Jeffrey Shannon	CA	William C. Dydo
H3	2 Greg Laabs	CA	Patrick J. Denevan
H3	3 Hector Realubit	CA	Andrew T. Beem
H4	2 Steven Brown	CA	Patrick J. Denevan
H4	2 Terrance Nygard	CA	Patrick J. Denevan
H4	2 Javier Rios	CA	Eric Hinrichs
H4	3 Sujata Sen	CA	Andrew T. Beem
P1	1 Aaron Bender	OR	Kelly A. Kellar
P1	1 Craig Bishop	HI	Max Leonard Marien
P1	1 Peter Dixon	OR	Kevin R. Lee
P1	1 Abraham Hansen	MN	Steven (Taylor) Couch
P1	1 Randy Harris	WA	Kimberly Phinney
P1	1 Ren Huschle	AK	Zion Susanno-Loddbby
P1	1 Calina Ide	OR	E. Scott Edwards
P1	1 Samuel Kirchenschlager	AK	Chris Reynolds
P1	1 Maui Meyer	OR	Kelly A. Kellar
P1	1 Duncan Millard	OR	Kelly A. Kellar
P1	1 Gregory A. Panero	OR	Kevin R. Lee
P1	2 Ryan Adams	UT	Paul Gurrieri
P1	2 James K. Barlow	CA	Robert Black
P1	2 Alex Childers	UT	Nathan Alex Taylor
P1	2 Mackenzie Cope	UT	Jonathan Jefferies
P1	2 Eric Gordon	UT	Nathan Alex Taylor
P1	2 Corbin Halliwill	CA	Robert Black
P1	2 Lynsey Ann Haynes	CA	Robert Black
P1	2 Antonina Kozyryeva	CA	Jason Shapiro
P1	2 Darren Kraker	CA	Christopher Grantham
P1	2 Eric Miller	CA	Jessica Frump
P1	2 Justin Miller	CA	Jeffrey J. Greenbaum
P1	2 Zach Mulcahy	CA	Robert Black
P1	2 John Slusser	UT	Nathan Alex Taylor
P1	2 Melissa Wanserski	UT	Nathan Alex Taylor
P1	3 Justin Barnes	CA	Jordan Neidinger
P1	3 Ash Bown	CO	Kevin McGinley

RTG	RGN NAME	STATE	RATING OFFICIAL
P1	3 Wesley Goulding	CA	Stephen Nowak
P1	3 William P. Krois	CO	Ryan J. Taylor
P1	3 Martha McSally	AZ	Aaron Cromer
P1	3 Trung Thanh Nguyen	CA	Vito Michelangelo
P1	3 Zeeshan Parvez	CA	Stephen Nowak
P1	3 Ian Pierce	NM	Charles (Chuck) Woods
P1	3 Doug Satterfield	CA	Vito Michelangelo
P1	3 John Spires	CO	Ryan J. Taylor
P1	4 Jeremy Bernal	FL	Thomas Mistretta
P1	4 Andrew Copeland	GA	Steven (Taylor) Couch
P1	4 Flora Le	DC	Max Leonard Marien
P1	4 Samuel Aaron Manzer	TN	Christopher J. Pyse
P1	4 Elise Helene Marshall	TN	Steven (Taylor) Couch
P1	4 Michael Milner	FL	Chris W. Santacroce
P1	4 Allan Young	GA	Vito Michelangelo
P1	5 Jakob Chapman	IL	Pete Michelmores
P1	5 Lance Edwards	BC	Jeff Shapiro
P1	5 Shaun Floris	BC	Rob Sporrer
P1	5 Magdalena Gajowniczek	IL	Christopher J. Pyse
P1	5 Nikkodem Gajowniczek	IL	Christopher J. Pyse
P1	5 Roger A. Irby	PA	Christopher Grantham
P1	5 Ron Wallis	IL	Christopher J. Pyse
P2	1 Peter Dixon	OR	Kevin R. Lee
P2	1 Abraham Hansen	MN	Steven (Taylor) Couch
P2	1 Ren Huschle	AK	Zion Susanno-Loddbby
P2	1 Calina Ide	OR	E. Scott Edwards
P2	1 Meg Ketcham	OR	Kelly A. Kellar
P2	1 Samuel Kirchenschlager	AK	Chris Reynolds
P2	1 Gregory A. Panero	OR	Kevin R. Lee
P2	1 Derrick Peppers	OR	Randolph Ruffin
P2	2 James K. Barlow	CA	Robert Black
P2	2 Alex Childers	UT	Nathan Alex Taylor
P2	2 Mackenzie Cope	UT	Jonathan Jefferies
P2	2 Eric Gordon	UT	Nathan Alex Taylor
P2	2 Corbin Halliwill	CA	Robert Black
P2	2 Lynsey Ann Haynes	CA	Robert Black
P2	2 Antonina Kozyryeva	CA	Jason Shapiro
P2	2 Darren Kraker	CA	Christopher Grantham
P2	2 Justin Miller	CA	Jeffrey J. Greenbaum
P2	2 Eric Miller	CA	Jessica Frump
P2	2 Zach Mulcahy	CA	Robert Black
P2	2 John Slusser	UT	Nathan Alex Taylor
P2	2 Melissa Wanserski	UT	Nathan Alex Taylor
P2	3 Justin Barnes	CA	Jordan Neidinger



Take your ratings and expiration date everywhere you fly. Download from the Members Only section of the USHPA website. Print, trim, and store in your wallet. Great for areas without cell coverage. Always available at www.USHPA.org. Save the PDF on your mobile device for easy reference.

PARTING IS SUCH SWEET SORROW.

We know that it can be hard to toss your old issues of USHPA Pilot in the recycle bin. Instead, give them a second life and help grow interest in our sports! Consider donating old magazines to your local community. Toss them on the table at work, or donate to doctor's offices, auto repair shops, libraries, or other local businesses.



USHPA DIRECTOR NOMINATIONS

Do you know someone who...

... is passionate about hang gliding and paragliding?

... is strongly motivated to help with the protection and growth of free-flight aviation?

... can both create and communicate goals to achieve their ideas, and then follow through on them?

Then please nominate him or her for the BOARD of DIRECTORS of USHPA! You may also nominate yourself. (No need to re-nominate current directors.)

Directors are the cornerstone of the US Hang Gliding and Paragliding Association. They develop policy to support the USHPA's mission and represent our members in the sports of hang gliding and paragliding. Under USHPA's new governance structure, directors will have more ability to bring about change than ever before - and heightened responsibility to go along with it. In addition to the qualities listed above, we're seeking individuals who can see the big picture, are willing to try new things, and have the ability to understand and work for all our pilots, regardless of any individual affiliations.

Director requirements include:

- Participate in monthly board meetings via teleconference
- Actively collaborate with committees
- Represent USHPA members, both regionally and nationally

Submit your nomination BEFORE SEPTEMBER 1st at ushpa.org/page/call-for-nominations

The USHPA welcomes and encourages your participation in this process. We also encourage members with unique viewpoints (such as women pilots, younger or college-age pilots, instructors, etc.) to run and contribute their valuable perspective to the organization.

RTG	RGN NAME	STATE	RATING OFFICIAL
P2	3 Ash Bown	CO	Kevin McGinley
P2	3 Wesley Goulding	CA	Stephen Nowak
P2	3 William P. Krois	CO	Ryan J. Taylor
P2	3 Martha McSally	AZ	Aaron Cromer
P2	3 Adam Sorensen	CA	Jordan Neidinger
P2	3 John Spires	CO	Ryan J. Taylor
P2	4 Jeremy Bernal	FL	Thomas Mistretta
P2	4 Andrew Copeland	GA	Steven (Taylor) Couch
P2	4 Samuel Aaron Manzer	TN	Christopher J. Pyse
P2	4 Elise Helene Marshall	TN	Steven (Taylor) Couch
P2	5 Jakob Chapman	IL	Pete Michelmores
P2	5 Lance Edwards	BC	Jeff Shapiro
P2	5 Shaun Floris	BC	Rob Sporrer
P2	5 Magdalena Gajowniczek	IL	Christopher J. Pyse
P2	5 Nikkodem Gajowniczek	IL	Christopher J. Pyse
P2	5 Roger A. Irby	PA	Christopher Grantham
P2	5 Adam Schamberger	IL	Mariyan Radev Ivanov
P2	5 Ron Wallis	IL	Christopher J. Pyse
P2	5 Ely Walsh	BC	Chris W. Santacroce
P2	5 Michael White	MD	Steve A. Wendt
P3	1 Christopher R. Gibisch	MT	Paul Roys
P3	1 Lucas Hansell	MT	Andy Macrae
P3	1 Andy Holmes	WA	Roger Brock
P3	1 Richard Mason	WA	Lane B. Lamoreaux
P3	1 Chelsea McKenzie	AK	Rob Sporrer
P3	1 Cristiano Muller Streibel	OR	Lane B. Lamoreaux
P3	1 Chris Walker	WA	Rob Sporrer
P3	2 Kelie Bailey	UT	Brian Clark
P3	2 Jason Baker	CA	Jason Shapiro
P3	2 Bret Bjorkman	CA	Rob Sporrer
P3	2 Michael Guiso	CA	Jeffrey J. Greenbaum
P3	2 Kevin Mahrabian	CA	Robert Black

RTG	RGN NAME	STATE	RATING OFFICIAL
P3	2 Mark Jason Malouin	UT	Chris W. Santacroce
P3	2 Matt McNichols	UT	Dale Covington
P3	2 Dawn Sheirzad	CA	Jesse L. Meyer
P3	2 David Suder	CA	Robert Black
P3	3 Evan Ackema	CA	Jordan Neidinger
P3	3 Jamie Bishop	CA	Mitchell Riley
P3	3 Riley Coffey	CO	Kevin McGinley
P3	3 James Drewett	CO	Chris W. Santacroce
P3	3 Ryan Gove	CO	Ryan J. Taylor
P3	3 David Hunt	CA	Max Leonard Marien
P3	3 William P. Krois	CO	Ryan J. Taylor
P3	3 Stephanie Linsley	CO	Johannes Rath
P3	3 Matthew Merina	CA	Jordan Neidinger
P3	3 Wouter Myburgh	CA	Max Leonard Marien
P3	3 Dustin O'Hara	CO	Sanders (Sam) Crater
P3	3 Cameron Weber	CO	Johannes Rath
P3	4 Tim Caplinger	FL	Thomas Mistretta
P3	5 Brad Allan	NY	Philippe Renaudin
P3	5 Chris DuPlay	VT	Calef Letorney
P3	5 Parimal Mohile	NJ	Philippe Renaudin
P3	5 Tom Plucinski	VT	Calef Letorney
P3	5 Jordan Stratton	WI	Johannes Rath
P4	1 Keenan Grady	OR	Nathan Alex Taylor
P4	1 Karl Hallman	MT	Paul Roys
P4	2 Chris Kennedy	CA	Brian Kerr
P4	2 David Morrey	UT	Jonathan Jefferies
P4	2 Ryan Runolfson	UT	Chris W. Santacroce
P4	3 Marshall Lukas Hill	CO	Kevin McGinley
P4	3 Catherine Rios	CO	Alejandro Palmaz
P4	3 Dan Shorb	NM	Charles (Chuck) Woods
P4	5 Jonathan Charles Hullsiek	NY	Hal Franklin
P4	5 Anthony Seibel	VT	Calef Letorney

AIRS

Accident/Incident Reporting System

is standing by at

airs.ushpa.org

If you've been injured or experienced a close call, file a report today.

All AIRS reports are completely confidential.



PHOTO BY SCOTT FAIRCHILD

Final [contributed by **ALEX ALLEN**]

Glass-off glory

It was a beautiful day in early March 2020, and the forecast for the day at Torrey Pines Gliderport, California looked promising from about 2 p.m. on. But, alas, as often happens, the forecast was not spot on, and the wind was a little too light to soar. After some para-waiting, I opted for a short flight down to the beach to enjoy the beautiful day.

By the time I hiked back up top, the winds were starting to look a little more promising. In fact, a few of us managed to squeak in some short flights with top landings. However, as will happen on days like that, too many people started trying to fly given the amount of lift, so some sank out. About the time that most pilots had given up and packed their gear, conditions started to change.

I had just started to pack up my wing when I felt enough of a breeze on my back that I decided to try one more time. Since I can always use more exercise, I was OK with the walk back up if I took one more sledder to the beach.

As luck would have it, the lift was decent enough to sustain, and after a couple of laps, I started getting more lift—enough to the point that I could not only top land with ease but also come in high above launch and wave to the small crowd enjoying the evening.

Eventually, another pilot decided to fly but that was it—the two of us had the air to ourselves. The other pilot went far north, and I stayed further south, flying closer to the crowds near the launch. The evening was warm and beautiful. The setting sun reflecting off the clouds and the wildflowers below me set a perfect backdrop for a relaxing evening flight.

In early March, folks were starting to get nervous about the COVID-19 pandemic, but states had not yet issued stay-at-home orders. Even with the present uncertainty caused by the pandemic, the memory of that wonderful March flight reminds me to see the beauty that continues to shine through. 🇺🇸



FLYING GEAR SERVICE SHOP

Handling All Your Service & Inspection Needs

GLIDER REPAIRS

Panel Replacements, Sewn and Taped Patching, Ripped Attachment Points

ANNUAL INSPECTIONS

Visual Check, Porosity, Line Replacements, Patching, Clean Out

LASER TRIM TUNING

Glider Tuning with Pre-Trim and Post-Trim Reports

RESERVE REPACKS

Rounds, Squares, and Rogallos

LINE MANUFACTURING

Sheathed and Unsheathed



1600 SQUARE FOOT FULL SERVICE SHOP
QUICK TURN-AROUND TIMES ON SERVICE

www.paragliding.com, 805.968.0980

Fly beyond!

The combined expertise of Naviter and Flytec help pilots fly farther, safer, and beyond their expectations.



Flytec.com or 800.662.2449

naviter

Flytec