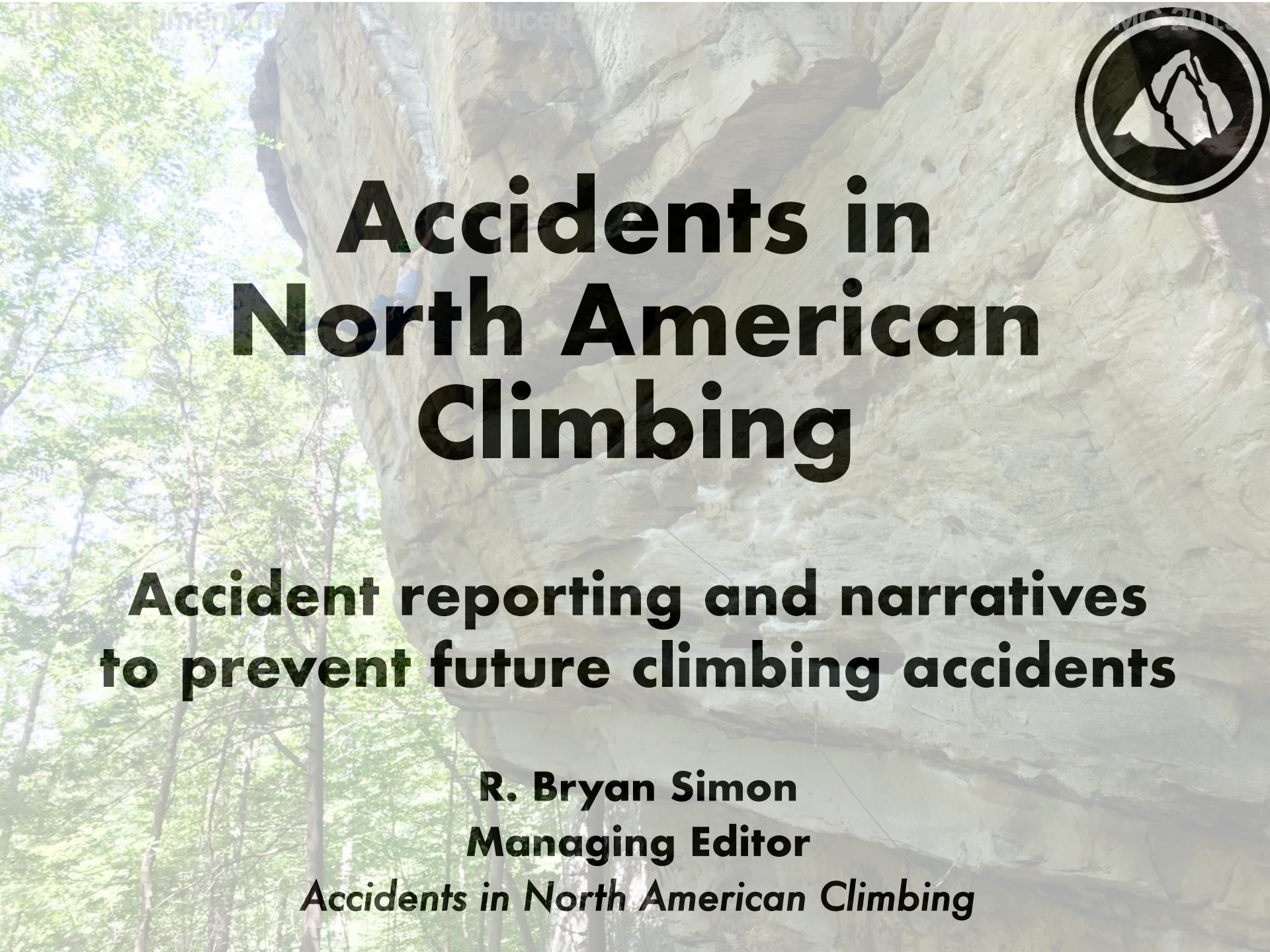


Accidents in North American Climbing

Accident reporting and narratives to prevent future climbing accidents

R. Bryan Simon
Managing Editor
Accidents in North American Climbing

Objectives

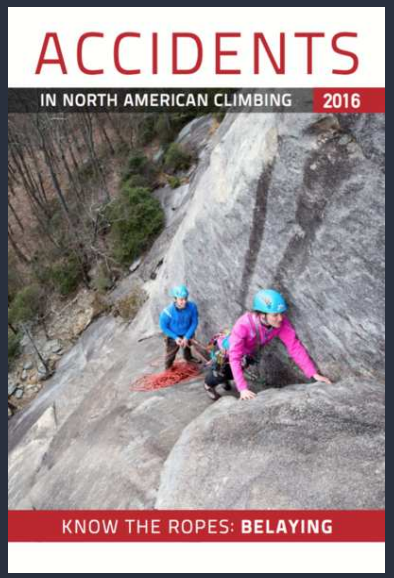
- What is *Accidents*?
  - Mission
  - History
- Climbing Injuries in the US
- Narratives and Data
  - Realistic training scenarios
  - Risk Identification
  - Data for risk management
- *ANAC* Features and Use
- Accessing data and search functions

Mission of *Accidents*

- The original mission of *Accidents* was to educate the growing numbers of climbers in postwar America and thus reduce the number of injuries and fatalities.
- This mission has remained mostly unchanged for the 71 years that the book has been published.

Mission of *Accidents*

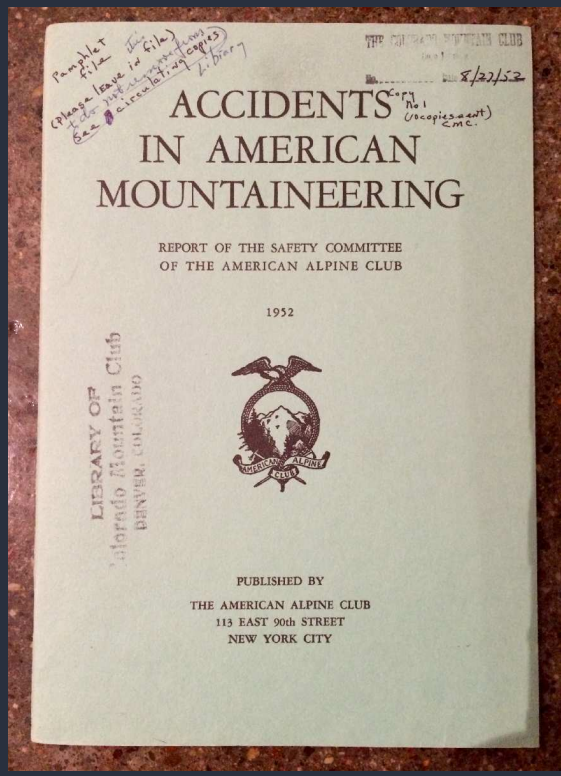
- The purpose of the book is to gather reports and data regarding climbing accidents within North America, identify contributing factors, and pass on lessons learned from each incident to educate climbers, guide services, and outdoor recreation leaders.



- We are not out to judge people who have gotten into trouble but to communicate well-written and unbiased reports.

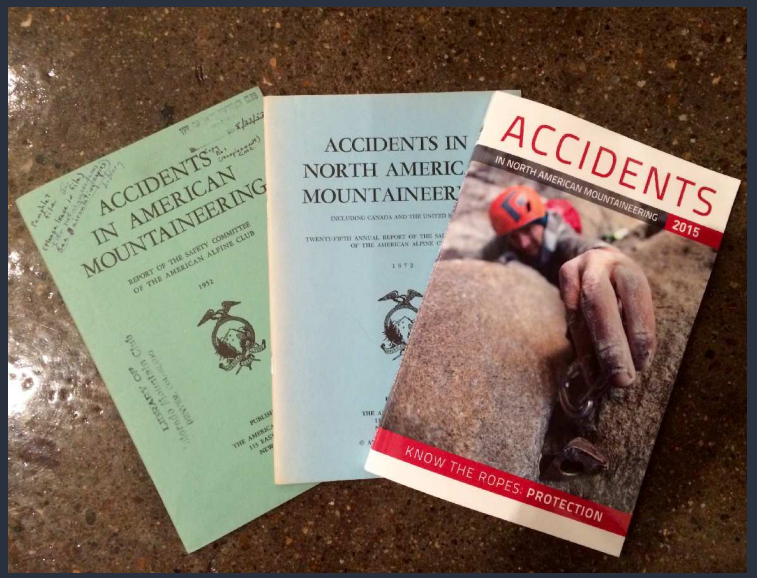
History of *Accidents*

- *Accidents* was created by the AAC's Safety Committee in 1947.
- Dr. Ben Ferris Jr. an early climbing injury researcher designed the format that is still followed today.
- Dr. Ferris was a specialist in public health and a very keen mountaineer, and he edited *Accidents* for more than two decades, from 1952 to 1973.



History of *Accidents*

- Jed Williamson took over for the next four decades as a volunteer.
- In 2015, Dougald MacDonald became the executive editor of all AAC publications and took over as the managing editor of *Accidents*.



How do we collect accident information?

- Self-reporting (online form)
- Team of 16 volunteer editors across the US and Canada
- Regular correspondents in Arizona, Yosemite, Mt. Shasta, Grand Teton NP, and Oregon
- Mountain Rescue Teams

How do we collect accident information?

- National parks
- State Parks
- National and State Forest Services
- Primarily from rangers and FOIA requests

What information do we collect?

- Specific location and route
- Age/Gender of climbers involved
- Experience level
- Injury description - type, side, and severity
- Primary and Secondary cause of the accident.
- All lessons learned
- If there was a problem with gear (i.e. gear pulled) we try to be as specific as possible.
- We also like to include a photo of the route and/or rescue (while protecting patient privacy)

- ANONYMITY!

Why do climbers not submit reports?

Fall on Rock – Lowering Errors, Rope Too Short

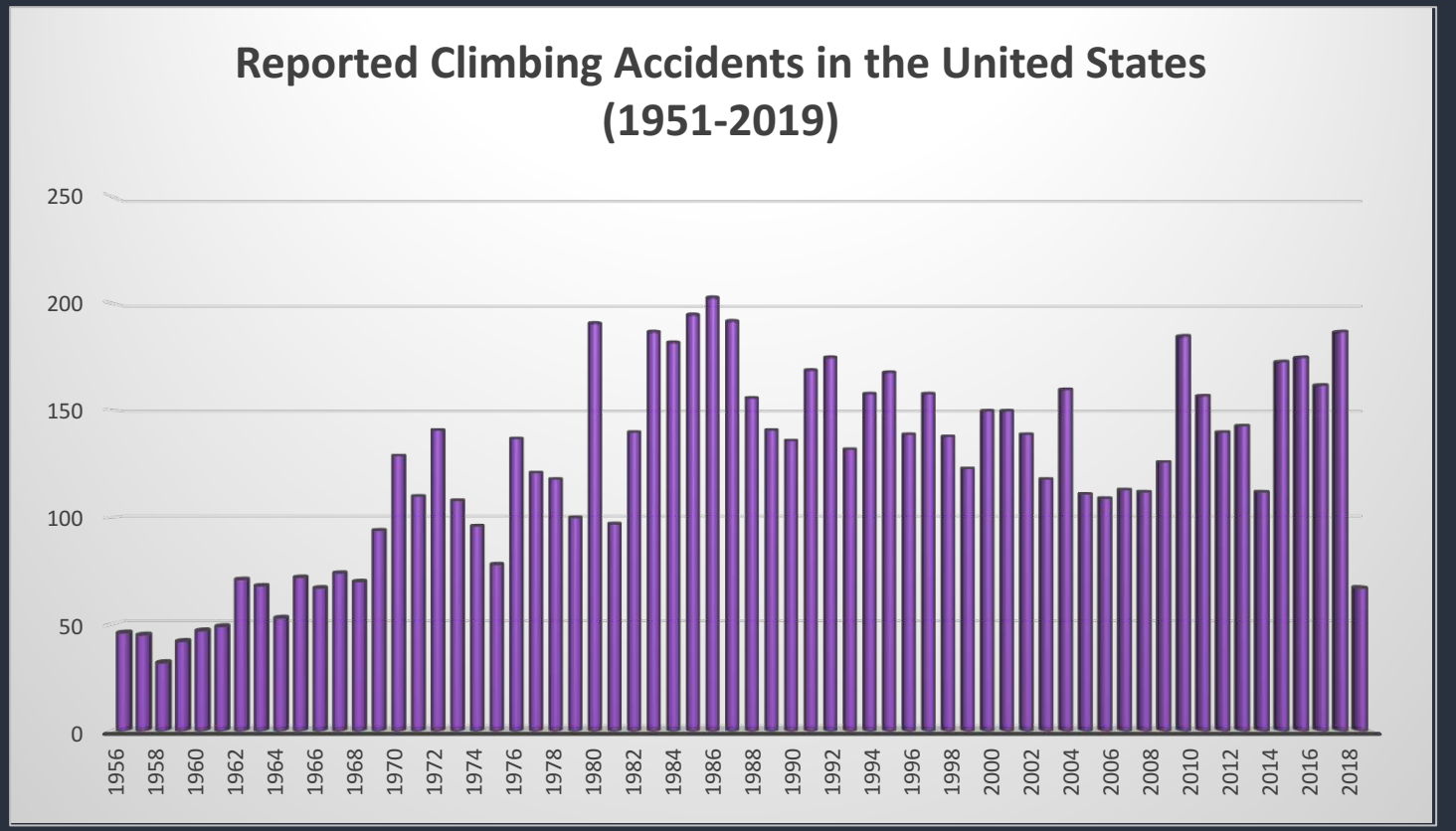
Washington, Index, Lower Town Wall

I had run up the route Godzilla (5.9) to put up a top-rope for my girlfriend and her family. At the last second her parents asked us to hang their rope instead of ours. I didn't think about it, but their rope was a 60m and mine was a 70m. I was climbing in approach shoes and everyone was chatting at the base—super casual, very relaxed. As I was lowering, we ran out of rope a few meters above the ground and my belayer accidentally let the end of the rope run through her brake hand and belay device. I dropped a few meters onto pretty gnarly rocks, landing on my butt and side and injuring my back a bit (compression fracture of two vertebrae).

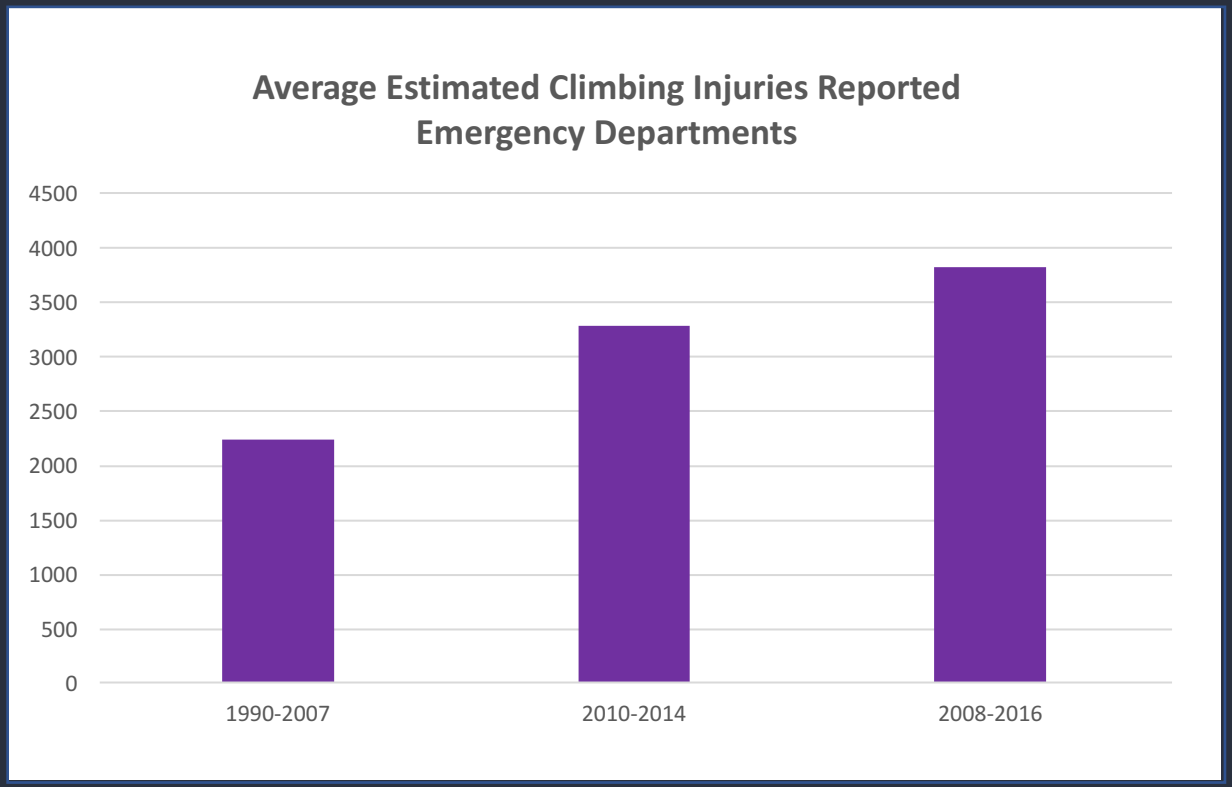
Analysis

Lots of things should have been done better—we should have thought about how long the rope was, we should have been paying more attention, we should have had a knot in the end of the rope. I wasn't wearing a helmet and was lucky to not injure my head—had I landed on my head, it probably would have been disastrous. My belayer had been climbing less than a year. Basically, things were all just a bit too lax. (*Source:*)

Climbing Injuries in the United States



Climbing Injuries in the United States



Rock Climbing Injuries Treated in US Emergency Departments, 2008-2016. (2019)

Climbing-Related Injury Among Adults in the United States: 5-Year Analysis of the National Emergency Department Sample. (2018)

Climbing Injuries in the United States

Demographics

- Median age of injured climbers = 26 yo
- Ages 20-39 = 60%/45%/59.5%
- Males = 66%/76%/85%

Most Common Causes

- Falls = 60%/50%/41%

Climbing Injuries in the United States

Injuries

- Most Common Injuries
  - Fractures – 27%/30%/36%
  - Sprains/Strains – 26%/8%/3%
- Most Common Injury location
  - Lower Extremity – 47%
  - Upper Extremity – 25%
  - Ankle Fracture – 27%

Climbing Injuries in the United States

What does *ANAC* miss?

Minor injuries

Overuse injuries

Climbing Injuries at your Crag?

So how do you find out about common injuries in your region/crag?

- Check out the narratives
  - Organized by state
- Contact your regional MRA teams
  - www.mra.org
- Contact local climber non-profits

Trends

- Leader falls vs. Equipment failure
- Increase in climbers, increase in accidents
- Gym to crag
- Falls from above
- and…

Trends

- Ascent vs. Descent
- 1951-2016 75% - 25%
- 2017 58% - 42%
- 2018 58% - 42%
- 2019 51% - 49%
- Communication at Transitions

How can ANAC assist in Risk Management?

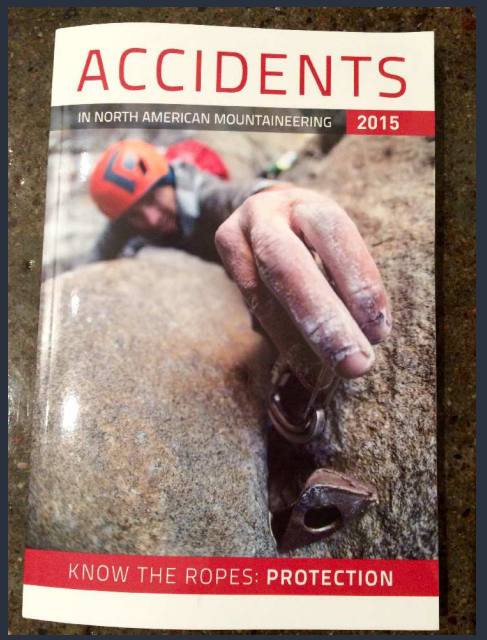
- Because of the detail provided within reports, these narratives can be adapted for:
  - Realistic scenarios for team training
  - Identification of planning considerations and environmental risks specific to your operational areas

How can ANAC assist organizations?

- Organizations can use ANAC to identify injury patterns in your respective operational area
- ID accident trends and the most common accident locations in your area

Data use for Risk Management

- Common Danger Zones
- Mitigation of risk from environmental and location specific danger
- Application in conjunction with first aid and evacuation planning

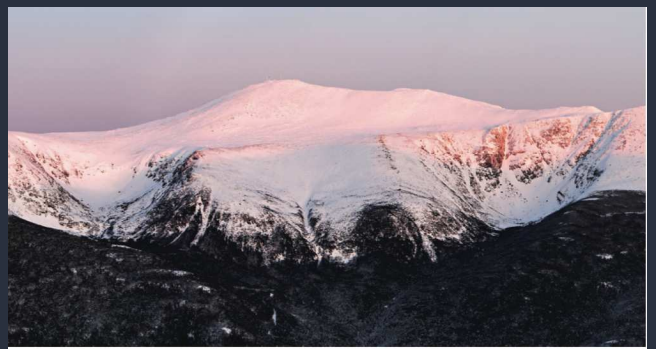


Features within *Accidents*

- Danger Zones
- Know the Ropes
- Essentials
- Data Summary

Features within *Accidents – Danger Zones*

- 2015 – The Nose, El Cap, CA
- 2016 – Grand Tetons, WY
- 2017 – Eldorado SP, CO
- 2018 – Mt. Hood, OR
- 2019 – Mt Washington, NH
- 2020 – New River Gorge, WV



Mt. Washington from the east, with Tuckerman Ravine on the far left and Huntington Ravine at far right. The rime-covered observatory buildings can be seen on top. *Brian Post*

Danger Zones

MT. WASHINGTON

Features within *Accidents – Know the Ropes*

- Previous topics include:
  - Rappelling
  - Belaying
  - 4th Class Travel
  - Placing Protection

Know the Ropes

MANAGING RISK

Planning and Reflection for Rock Climbers

BY RON FUNDERBURKE & DEREK DEBRUIN

Last year millions of viewers were awed by *Free Solo*, the feature film that documented Alex Honnold's historic solo ascent of El Capitan. We were stupefied by the level of free climbing ability and mental strength required to even conceive of this feat, much less achieve it. We also were captivated by the debate that ensued. Many commentators viewed Alex's climb as a moral failing, and many harangued the system that would allow such an ascent and the society that would laud it.

The debate begs some questions: How do we perceive risk as rock climbers? How do we manage it? Do we consistently manage risk? What are the most common inconsistencies? Even if we all have different relationships to risk, isn't the desire to challenge ourselves in a complex and dangerous environment at least part of our essential motivation to climb? Is it possible that we all have more in common with Alex Honnold than we think?

Features within *Accidents - Essentials*

ESSENTIALS

TRAUMATIC STRESS INJURIES
IMMEDIATE AND LONG-TERM AID

By Laura McGladrey

ESSENTIALS

LOWER LEG INJURIES
ASSESSMENT AND TREATMENT

By R. Bryan Simon

ESSENTIALS

DEEP WATER SOLOING
SAFETY STEPS FOR A FUN NEW SPORT

By R. Bryan Simon and Seth C. Hawkins

ESSENTIALS

MICRO-CAMS
WHAT TO EXPECT, HOW TO OPTIMIZE

By the Editors

ESSENTIALS

SPEAK UP
INTERVENING EFFECTIVELY FOR SAFER CLIMBING

By Ron Funderburke

ESSENTIALS

SHOCK
ASSESSMENT AND TREATMENT

By Dave Weber & Dr. Peter Hackett

ESSENTIALS

WOUND MANAGEMENT
FROM GOBIES TO SERIOUS LACERATIONS

By R. Bryan Simon

ESSENTIALS

AVALANCHE RESPONSE
PHYSIOLOGY, RESCUE, AND RESUSCITATION

By Dave Weber and Dr. Colin Grissom

ESSENTIALS

CLEAR WEIGHT TRANSITIONS
A CRITICAL YET OFTEN IGNORED STEP

By Molly Loomis

Features within *Accidents – Data Summary*

TABLES

TABLE I: REPORTED CLIMBING ACCIDENTS

Year	Number of Accidents Reported		Total Persons Involved		Injured		Fatalities	
	USA	CAN	USA	CAN	USA	CAN	USA	CAN
1951	15	n/a	22	n/a	11	n/a	3	n/a
1952	31	n/a	35	n/a	17	n/a	13	n/a
1953	24	n/a	27	n/a	12	n/a	12	n/a
1954	31	n/a	41	n/a	31	n/a	8	n/a
1955	34	n/a	39	n/a	28	n/a	6	n/a
1956	46	n/a	72	n/a	54	n/a	13	n/a
1957	45	n/a	53	n/a	28	n/a	18	n/a
1958	32	n/a	39	n/a	23	n/a	11	n/a
1959	42	2	56	2	31	0	19	2
1960	47	4	64	12	37	8	19	4
1961	49	9	61	14	45	10	14	4
1962	71	1	90	1	64	0	19	1
1963	68	11	79	12	47	10	19	2
1964	53	11	65	16	44	10	14	3
1965	72	0	90	0	59	0	21	0
1966	67	7	80	9	52	6	16	3
1967	74	10	110	14	63	7	33	5
1968	70	13	87	19	43	12	27	5
1969	94	11	125	17	66	9	29	2
1970	129	11	174	11	88	5	15	5
1971	110	17	138	29	76	11	31	7
1972	141	29	184	42	98	17	49	13
1973	108	6	131	6	85	4	36	2
1974	96	7	177	50	75	1	26	5
1975	78	7	158	22	66	8	19	2
1976	137	16	303	31	210	9	53	6
1977	121	30	277	49	106	21	32	11
1978	118	17	221	19	85	6	42	10
1979	100	36	137	54	83	17	40	19
1980	191	29	295	85	124	26	33	8
1981	97	43	223	119	80	39	39	6
1982	140	48	305	126	120	43	24	14
1983	187	29	442	76	169	26	37	7
1984	182	26	459	63	174	15	26	6
1985	195	27	403	62	190	22	17	3
1986	203	31	406	80	182	25	37	14
1987	192	25	377	79	140	23	32	9
1988	156	18	288	44	155	18	24	4
1989	141	18	272	36	124	11	17	9
1990	136	25	245	50	125	24	24	4
1991	169	20	302	66	147	11	18	6
1992	175	17	351	45	144	11	43	6
1993	132	27	274	50	121	17	21	1
1994	158	25	335	58	131	25	27	5
1995	168	24	353	50	134	18	37	7
1996	139	28	261	59	100	16	31	6
1997	158	35	323	87	148	24	31	13
1998	138	24	281	55	138	18	20	1
1999	123	29	248	69	91	20	17	10
2000	150	23	301	36	121	23	24	7
2001	150	22	276	47	138	14	16	2
2002	139	27	295	29	105	23	34	6
2003	118	29	231	32	105	22	18	6
2004	160	35	311	30	140	16	35	14
2005	111	19	176	41	85	14	34	7
2006	109	n/a	227	n/a	89	n/a	21	n/a
2007	113	n/a	211	n/a	95	n/a	15	n/a
2008	112	n/a	203	n/a	96	n/a	19	n/a
2009	126	n/a	240	n/a	112	n/a	23	n/a
2010	185	n/a	389	n/a	151	n/a	34	n/a
2011	157	n/a	348	n/a	109	n/a	29	n/a
2012	140	15	309	36	121	12	30	2
2013	143	11	283	24	100	5	21	4
2014	112	10	170	19	89	8	28	1
2015	173	20	258	52	111	16	37	4
2016	175	23	302	58	134	17	32	6
2017	162	24	n/a	n/a	116	19	34	2
2018	187	17	n/a	n/a	198	12	17	5
TOTAL	**8,005**	**1,078**	**n/a**	**n/a**	**6,679**	**804**	**1,713**	**316**

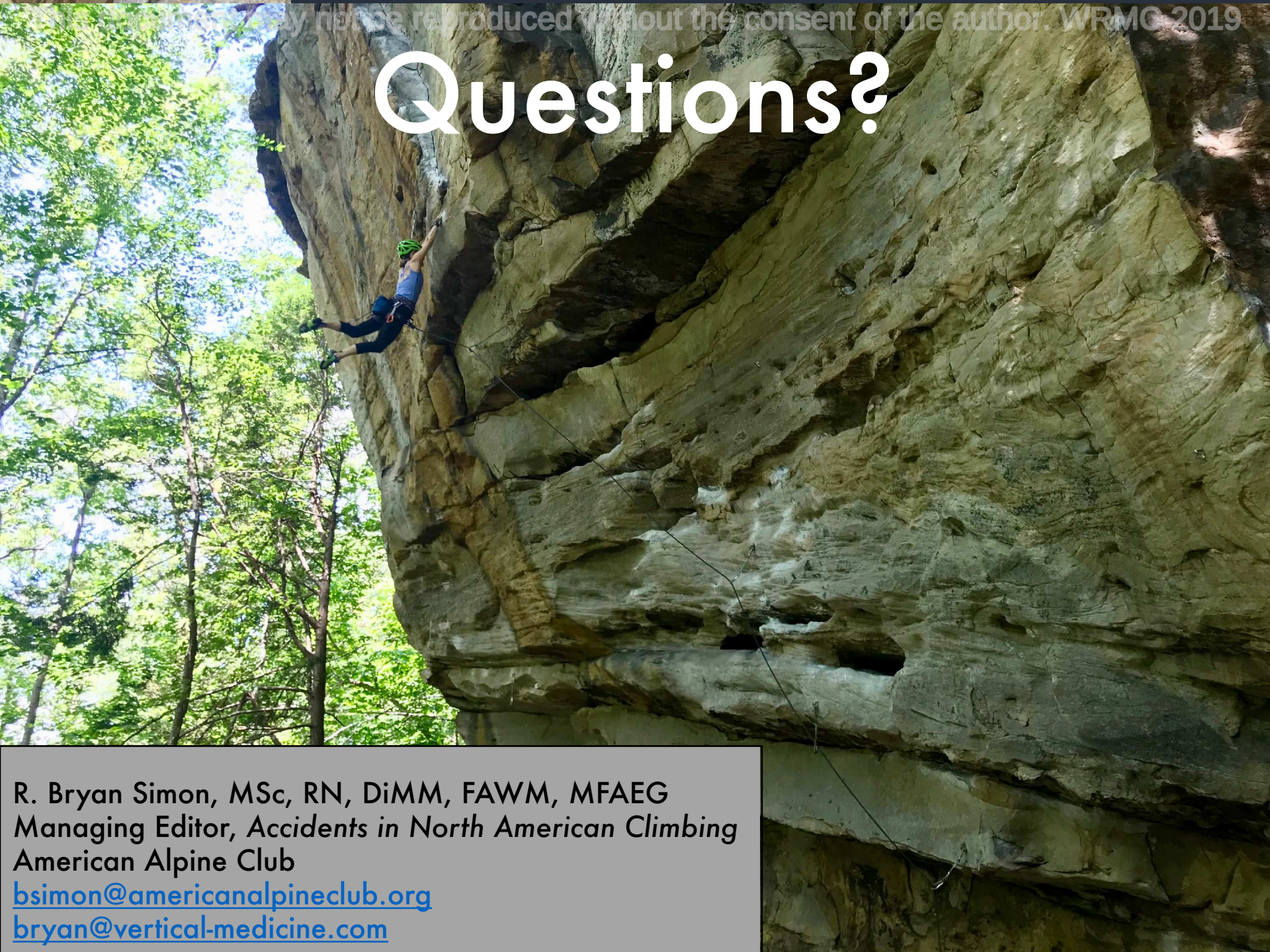
Conclusion

Our mission is to prevent accidents through education and thus reduce the number of injuries and fatalities in the climbing community.

Interested in Assisting?

- We are always looking for volunteers with a climbing and writing background to assist in collecting and editing reports.
- We are also always interested in ideas for Essentials pieces!
- bsimon@americanalpineclub.org

Questions?



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