# Tom D. Crouch Curator Emeritus National Air and Space Museum Smithsonian Institution

E-MAIL: croucht@si.edu

BIRTH: February 28, 1944, Dayton, Ohio

EDUCATION: BA, History (Honors), Ohio University, 1966;

MA, History (Honors), Miami University, 1968;

Ph.D., American History, The Ohio State University, 1976; Doctor of Humane Letters, Wright State University, 2001

RESEARCH Aerospace History

US Social and Cultural History

INTERESTS: US History to 1940

History of Technology

EMPLOYMENT: 1967-1969: Social studies teacher, Grades, 7-12, South Charleston, Ohio

1969-1973: Director, Education Department, Ohio Historical Society

1973-1974: Director, Ohio American Revolution Bicentennial Advisory

Commission, Ohio Historical Society

1974-1985: Associate Curator to Full Curator of Astronautics and Aeronautics, National Air and Space, Smithsonian Institution

1985-1987: Curator/Supervisor, Division of Engineering and Industry,

National Museum of American History, Smithsonian Institution

1987-1989: Chairman, Department of Social and Cultural History, National Museum of American History, Smithsonian Institution

1989-1998: Chairman, Department of Aeronautics, National Air and

Space Museum, Smithsonian Institution

1998-Present: Senior Curator, Aeronautics, National Air and Space

Museum, Smithsonian Institution

2000-2003 (Concurrent as Presidential Appointee): Chairman, First Flight Centennial Federal Advisory Board

TEACHING:

1974-1975: Lecturer in American History, Northern Virginia Community College, Loudon County Campus

1975-1983: Lecturer in the History of Technology, Department of History, Department of History, University of Maryland. During this period I was responsible for all departmental offerings in the History of Technology as part of the program of the Center for the History and Philosophy of Science.

1990-1998: Lecturer on Lighter-Than-Air flight and early aviation, History of Air Power Course, Office of Air Force History

1987-1999: Occasional appointments as a Lecturer/Professor responsible for a graduate course in the George Washington University Museum Studies Program: "Curatorial Research and Exhibition Development."

PROFESSIONAL:

In the past, Dr. Crouch has served as a member of both the history committees of the American Institute of Aeronautics and Astronautics and the American Astronautical Society. He had also been a member of the history advisory committees of both the NASA and the EPA. In the fall of 2000, President Clinton appointed Dr. Crouch to Chair the First Flight Centennial Federal Advisory Board. He is currently a member of the History Committee of the AIAA, and a member of the historic sites board of that organization.

SPEAKING:

Dr. Crouch averages 5-10 lectures annually away from Washington. He is an AIAA Distinguished Lecturer.

CONTRACTS:

I have served as a consultant to a variety of organizations, including: the National Park Service; the National Geographic Society; Time-Life Books; the USAF History Program; a variety of university presses, including Princeton, the University of California, Johns Hopkins, the University of North Carolina and Ohio University; WGBH/NOVA, and a variety of other television and radio programs.

**SPECIAL** 

Management for Supervisors, Smithsonian Institution, 1984

#### SELECT BIBLIOGRAPHY BOOKS

<u>The Giant Leap: A Chronology of Ohio Aerospace Events and Personalities</u> (Columbus, Ohio: The Ohio Historical Society, 1971). Won Ohioana Book Award, 1972.

Ohio '76: A Guide for Bicentennial Planners in the Buckeye State (Columbus, Ohio: Ohio Historical Society, 1973).

<u>Charles A. Lindbergh: An American Life</u> (Washington, D.C.: The Smithsonian Institution Press, 1977). Edited.

Apollo: Ten Years Since Tranquility Base (Washington, D.C.: The Smithsonian Institution Press, 1979). Edited with Richard P. Hallion. Awarded Aviation/Space Writers Association prize for literary merit.

<u>A Dream of Wings: Americans and the Airplane, 1875-1905</u> (New York: W.W. Norton, Inc., 1981). Original manuscript won AIAA History Manuscript Prize, 1976.

<u>Bleriot XI: The Story of a Classic Airplane</u> (Washington, D.C.: The Smithsonian Institution Press, 1982).

<u>The Eagle Aloft: Two Centuries of the Balloon in America</u> (Washington, D.C.: The Smithsonian Institution, 1983). Awarded Best Non-Fiction Book of the Year prize by the Aviation/Space Writers Association, 1983.

<u>The Bishop's Boys: A Life of Wilbur and Orville Wright</u> (W.W. Norton, Inc., 1989). Awarded Christopher Prize, 1989

The National Aeronautics and Space Administration (NY: Chelsea House, 1990).

<u>A Dream of Wings: Americans and the Airplane, 1875-1905</u> (Washington, D.C.: Smithsonian Institution Press, 1989). A new paperback edition with a new forward.

with Alex Spencer, eds., <u>History of Rocketry and Astronautics</u> (San Diego, CA: AAS, AAS History Series, Vol. 14, 1993).

Co-Editor, <u>National Aerospace Conference Proceedings</u> (Dayton, Ohio: Wright State University, 1999)

Aiming for the Stars: Dreamers and Doers of the Space Age (Washington, D.C.: The Smithsonian Institution Press, 1999)

<u>First Flight: The Wright Brothers and the Invention of the Airplane</u> (Washington, D.C.: National Park Service, 2003)

with Peter Jakab, <u>The Wright Brothers and the Invention of the Aerial Age</u> (Washington, D.C.: The National Geographic Society, 2003)

Wings: A History of Aviation from Kites to the Space Age (New York: W.W. Norton, 2003), Won the 2005 AIAA Gardner-Lasser Aerospace History Literature Award.

Rocketeers and Gentlemen Engineers: A History of the American Institute of Aeronautics and Astronautics...and What Came Before (Reston, VA: AIAA, 2006)

<u>Lighter-Than-Air: An Illustrated History of Balloons and Airships</u> (Baltimore: The Johns Hopkins University Press, 2009)

#### ARTICLES IN MAGAZINES AND JOURNALS

"Thomas Kirkby: Pioneer Aeronaut in Ohio," <u>Ohio History</u>, Vol. 79, No. 1 (Winter 1971), 56-62.

"Up, Up, and-Sometimes-Away," <u>Journal of the Cincinnati Historical Society</u>, Vol. 28-29 (Winter 1971), 108-132.

"Mason's Aerial Steamboat," <u>Journal of the American Aviation Historical Society</u>, Vol. 19, No. 2 (Spring 1974), 155-157.

"Americans and the Airplane: A History of American Aviation, 1822-1905," <u>Aviation</u> Quarterly, Vol. 1, No. 4 (Winter 1975).

"Americans and the Airplane, Part II, The Early Years, 1822-1875," <u>Aviation Quarterly</u>, (Spring 1976).

"Americans and the Airplane, Part III, Octave Chanute and the Glider Years," <u>Aviation Quarterly</u>, (Summer 1976).

"Americans and the Airplane, Part IV, The Wright Triumph," Aviation Quarterly, (Fall 1976).

"Washington Harrison Donaldson: American Aerial Showman," <u>Aviation Quarterly</u>, (Spring 1977).

"The Gasbag Era in America," <u>Aviation Quarterly</u>, (Summer 1977).

"December 1903--The Month of the Flying Machines," Smithsonian (December 1978).

"The Wright Brothers: A Picture Essay," <u>Astronautics and Aeronautics</u> (Winter 1978), with C.H. Gibbs-Smith.

"Early Flight--A New Museum Gallery Recreates a Pre-World War I Aeronautical Exposition," Air and Space (January-February 1980).

"The Road to Kitty Hawk," US Air (June 1980).

"Wings Over the Dunes," Singing Sands (Summer 1980).

"IAS: The Origin and Early Years of the Institute of the Aeronautical Sciences," <u>Astronautics</u> and Aeronautics (May 1981).

"To Fly to the World in the Moon: Cosmic Voyaging From Lucian to Sputnik," Eugene Emme, ed., Science Fiction and Space Futures (AAS History Series #5) (San Diego, CA: American Astronautical Society, 1981), 7-27

"The Origins of a Classic: Octave Chanute, A.M. Herring and Their Two-Surface Glider of 1896-1897," <u>Bungee Cord</u> (Spring 1981), reprinted in <u>Soaring</u> (Spring 1983).

"Lindbergh: An American Hero," Air and Space (Summer 1981).

"91 Hours, 8 Minutes, 10 Seconds: Around the World With Howard Hughes," <u>Air and Space</u> (Fall 1981).

"Le Petite Santos," Model Aviation (December 1981).

"The Wright Brothers," Air and Space (Winter 1982).

"Flight and the Founding Fathers," Special Supplement for the New York Times Magazine (May, 1983).

"The Ecker Flying Boat," W.W. I Aero (April 1984), No. 99.

"Dr. Franklin's Window: Americans View the Birth of Flight," The Museologist (Spring 1984).

"Fair Voyagers: Intrepid Women in American Ballooning,": <u>Ballooning</u> (January-February 1984).

"Some Thoughts on John Montgomery," Bungee Cord (1984).

"Taking to the Air," Science '84 (Fifth Anniversary Issue, November 1984).

"Report of the SHOT Annual Meeting Session on Early Aeronautics," <u>Technology and Culture</u> (1984).

"A Practical Flying Machine: The 1905 Wright Flyer," Timeline (Summer 1985).

"Oshkosh, B'Gosh," National Geographic Traveler (Summer 1985), Vol. 2, No. 2, 50-60.

"How the Bicycle Took Wing," American Heritage of Invention and Technology (Summer

1986), 11-16, reprinted in SIRS Science Reprints, No. 67, 1987.

"Capable of Flight: The Wright-Smithsonian Feud," <u>American Heritage of Invention and Technology</u> (Spring 1987), 34-46.

"A Wrong or Two Wrights: A Disputed Photograph," <u>Timeline</u> (August-September 1987), 42-47.

"Who Else Flew First," American Heritage of Invention and Technology (Summer 1987, 2.

"From Dream to Reality," in <u>The Smithsonian Book of Flight</u> (Washington, D.C.: Smithsonian Institution Press, 1987), 28-30.

"Kitty Hawk, O Kitty," American Heritage (1988).

"Some Thoughts on Public History and Social Responsibility," <u>Illinois Historical Journal</u> (Fall 1989), pp. 195-200.

"Otto Lilienthal and the Birth of Aeronautical Engineering," <u>Aeronautical Design: The Lessons Learned</u> (Ann Arbor: University of Michigan, 1990)

"In a Flight of Words: Robert Frost's Outer Banks," <u>Outer Banks Magazine</u> (1991-1992), pp. 28-31; 74-75.

"Foreword," for <u>The Yamamoto Mission</u>, R. Cargill Hall, ed. (Washington, D.C.: Smithsonian Institution Press, 1990.).

"Foreword," for a new edition of R. Fredette, <u>The Sky on Fire: The First Battle of Britain</u> (Washington, D.C.: Smithsonian Institution Press, 1990.)

"Otto Lilienthal and the Birth of Aeronautical Engineering," in <u>Essays Commemorating the 75th Anniversary of the Department of Aeronautical Engineering, University of Michigan</u> (Ann Arbor: University of Michigan, Dept. of Aero Engineering, 1991).

"Otto Lilienthal und die Amerikaner," in W. Schwipps, ed., <u>Die Schule Lilienthals</u> (Berlin: MVT, 1992), pp. 53-81.

"Why Wilbur and Orville?: Some Thoughts on the Wright Brothers and the Process of Invention" in R. Weber and David Perkins, <u>Inventive Minds: Creativity in Technology</u> (New York: Oxford University Press, 1992).

"Hey Marge, Are We Still At Air and Space: Some Thoughts on a New Gallery at the National Air and Space Museum," <u>Over the Front</u> (1993).

"Les Jeunes Annees (1867-1899)," Icare (1993/4 Trimestriel, No. 147), pp. 10-22.

- "L'invention a Vendre (1904-1909), Icare (1993/4 Trimestriel, No. 147), pp. 58-80.
- "La Guerre des Brevets (1909-1912)," <u>Icare</u> (1993/4 Trimestriel, No. 147), pp 80-100.
- "The 1905 Flyer," in Mary Matthews, ed., <u>The Wright Brothers at Carillon Historical Park</u> (Dayton, Ohio: Carillon Park, 1993), pp. 16-30.
- "Learning from the Past," in, Jane R. Glaser and Artemis Zenetou, eds., <u>Gender Perspectives:</u> <u>Essays on Women in Museums</u> (Washington, D.C.: Smithsonian Institution Press, 1994), pp. 127-131.
- "Tribute to Ivonette Wright Miller," <u>Congressional Record</u> (October 19, 1995, Vol. 141, Number 160)
- "Samuel Pierpont Langley," "The Wright Brothers," "John Jeffries," "W. Von Braun," <u>American National Biography</u> (Oxford University Press, 1995)
- "Twenty Years and Counting," Air & Space Smithsonian (1996)
- "Octave Chanute: Pioneer of Flight," <u>National Soaring Museum Historical Journal</u> (Vol. 18, No. 2, 1996), pp. 4-16.
- "Octave Chanute and the Indiana Glider Trials of 1896," <u>AIAA Journal</u> (May 1997, Vol. 35, No. 5), pp. 769-775.
- "Capable of Flight: The Saga of the 1903 Airplane," in Amy Henderson and A. Kaeppler, eds., <u>Exhibiting Dilemmas: Issues of Representation at the Smithsonian</u> (Washington, D.C.: Smithsonian Institution Press, 1997), pp. 92-116
- "Local Son: John Joseph Montgomery and the Glider Trial of 1884," <u>Journal of the West</u> (July 1997; Vol. 36, No. 5), pp. 21-29
- "Risky Business: Some Thoughts on Controversial Exhibitions, <u>Museum International</u> (July-September 1997; No. 3), pp. 8-14.
- "The Thrill of Invention," Air & Space Smithsonian (April/May 1998: Vol. 13, No. 1)
- "Santos-Dumont and the NASM Airship," <u>Air & Space Smithsonian</u> (to appear in the June/July 1998 issue)
- "From the Earth to the Moon," movie review, <u>The Journal of American History</u> (December 1998), pgs. 1197-1199.
- "The Future of Flight," in Sandra Hackman, ed., <u>The NOVA Reader: Science at the Turn of the Millennium</u> (New York: TV Books, 1999), pgs. 188-189

- "Introduction," <u>National Aerospace Conference Proceedings</u> (Dayton, Ohio: Wright State University, 1999), pgs. iv-vi.
- "First Flight? Says Who?", <u>National Aerospace Conference Proceedings</u> (Dayton, Ohio: Wright State University, 1999), pgs. 114-121.
- "An Airplane for Everyman: The Department of Commerce and the Light Airplane Industry," in Roger Launius, ed., <u>Innovation and the Development of Flight</u> (College Station, Texas: Texas A&M University Press, 1999), pgs. 166-187.
- "Kill Devil Hills, 17 December 1903," <u>Technology and Culture</u> (July 1999, Vol. 40, No. 3), pgs. 595-598.
- "Wilbur and Orville Fly A Kite: The Crucial Experiments of 1899," <u>The Drachen Foundation Kite Journal</u> (No, 3, Fall 1999), pgs. 12-19.
- "Flight in America, 1784-1919," <u>CRM: Cultural Resources Management</u> (Vol. 23, No. 2 2000), pgs. 4-8.
- "Octave Chanute: Aeronautical Pioneer,"," <u>CRM: Cultural Resources Management</u> (Vol. 23, No. 2 2000), pgs. 14-15.
- "Bishop Wright and his Diaries," in Milton Wright, <u>Bishop Milton Wright</u>, <u>Diaries</u>, <u>1857-1917</u>, Wright State University, 2000), pgs. xii-xv.
- "Blaming Wilbur and Orville: The Wright Patent Suits and the Growth of American Aeronautics," in, Peter Galison and Alex Roland, <u>Atmospheric Flight in the Twentieth Century</u> (Dordrecht/Boston/London: Kulwer Academic Publishers, 2000), pgs. 287-300.
- "The Making of a Classic," introduction to a new edition of F. Stansbury Haydon, <u>Military</u> <u>Ballooning During the Early Civil War</u> (Baltimore: Johns Hopkins University Press, 2000), pgs. xi-xxiii.
- "The Wright Family of Dayton: A Tradition of Stewardship," 1905 Wright Flyer: The First Practical Airplane (Dayton, Ohio: 2000)
- "The Final Journey of Breitling Orbiter 3," in 1999 Annual Report of the National Air and Space Museum (Washington, D.C.: NASM, 2000), pgs. 14-19.
- "A Gift of Art: The Durant Collection Comes Home," <u>1999 Annual Report of the National Air and Space Museum</u> (Washington, D.C.: NASM, 2000), pgs. 20-25.
- "Reaching Toward Space," Smithsonian Magazine (February 2001), pgs. 38-42.
- "Introduction: A Gift off Tradition," <u>The Genesis of Flight: The Aeronautical History Collection of Colonel Richard Gimbel</u> (Seattle, WA: University of Washington Press, 2000), pgs. 1-34.

"Printed Books, 1850-1914," <u>The Genesis of Flight: The Aeronautical History Collection of Colonel Richard Gimbel</u> (Seattle, WA: University of Washington Press, 2000), pgs., 91-147.

Tom D. Crouch, "An Appreciation of Arthur Renstrom," Renstrom, Goldblatt, Minkus and Berube, Wilbur and Orville Wright: A Bibliography Commemorating the One-Hundredth Anniversary of Powered Flight (Washington, D.C.: NASA, 2003)

"Meeting Wilbur and Orville," Air & Space Smithsonian (March 2003)

"Der erste Flug: wer hat ihn wirlich vollbracht?" <u>Luftfahrt</u> (27 Jahrgang, 1/2003(92), pgs. 3-15

"Vision," <u>First Flight Visions: Celebrating the 100<sup>th</sup> Anniversary of Powered Flight</u> (Lisa Holian Loy: Kitty Hawk, NC, 2003), 1-2.

Blaming Wilbur and Orville and Orville: The Wright Patent Suits and the Growth of American Aviation, The George W. Jalonick III and Dorothy Cockrell Jalonick Memorial Distinguished Lecture (Richardson, Texas: The University of Texas at Dallas, 2003)

"Der erste Flug: wer hat ihn wirlich vollbracht?" Luftfahrt (27 Jahrgang, 3/2003(92), pgs. 3-5

"The Surly Bonds of Earth: Images of the Landscape in the Work of Some Aviator / Authors, 1910-1969, in Dominick Pisano, <u>The Airplane in American Culture</u> (Ann Arbor: University of Michigan Press, 2003), 20-1-219.

"Why Airplanes Look the Way They Do?" in Anthony Springer, ed., <u>Aerospace Design:</u> <u>Aircraft, Spacecraft, and the Art of Modern Flight</u> (London: Merrill, 2003), 28-37.

"Curator's Bookshelf," Museums Washington (Spring/Summer 2004, Vol. 6, No.1), 85.

"Overrated & Underrated-Airplanes," American Heritage (October 2003), 39-40.

"Introduction," <u>Final Report of the Centennial of Flight Commemoration</u> (Washington, D.C.: Centennial of Flight Commission, 2004), 2-5.

"Balloons," "Canals and Waterways," American Trails," <u>The Encyclopedia of the New American Nation</u> (New York: Charles Scribner's Sons, 2005)

"Willy Ley: Chronicler of the Early Space Age," in Virginia Dawson and Mark Bowles, Realizing the Dream of Flight: Biographical Essays in Honor of the Centennial of Flight, 1903-2003 (Washington, D.C.: NASA, 2005), 155-163.

""Looking forward...looking back," Aerospace America (January 2006)

"Rockwell's Space Legacy," Air & Space Smithsonian (September 2004), 73.

## <u>The Wright Brothers and the Tradition of American Aerospace Achievement</u> (Colorado Springs: USAFA, 2006)

Review essay, W.. David Lewis, Eddie Rickenbacker, WW I Aero (August 2006), 115-119.

"The Roots of Military Aviation," and "Col. Joseph Kittinger," for Dik Daso, <u>U.S. Air Force: A Complete History</u> (Hugh L. Levin, 2006)

"Legend, Memory and War," Curator (vol. 49, no. 4, October 2006), 395-397.

"Aerospace Museums: A Question of Balance," Curator (vol. 50, No. 1, January 2006), 19-32.

"The Wright Brothers: Pattern for American Aerospace Power," in. Anthony Cheung, ed., Winged Crusade (Chicago: Impact press, 2006).

"Searching for Amelia," <u>American Heritage of Invention and Technology</u> (Summer 2007, Vol. 23, No. 1)

"Another First for Wright Brothers National Memorial," <u>In the Park</u> (Summer 2008)

"Present at Creation," Air & Space (December 2008)

"Fashion Lighter Than Air," Air & Space (July 2009), Vol. 24, No. 2, pgs. 14-15.

Review: Who Owns the Sky? The Struggle to Control Air pace from the Wright Brothers On, in, Business History Review / Volume 83 / Issue 03 / Autumn 2009, pp 633-635. http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=8252776&fileId=S0 007680500003159

- "Where Do Ailerons Come From?" Air & Space Smithsonian (September 2009), 12.
- "A Machine of Practical Utility," American Heritage (Vol. 59, No. 4, Winter 2010), 68-70.
- "A Gift of Art." Air & Space Smithsonian (March 2010), 17
- "A Brave Thing: The Engineers Club or Dayton," Timeline (July-September 2010), 23-37.

<sup>&</sup>quot;Chesley Bonestell and his Lunar Landscape Mural"

<sup>&</sup>quot;Robert McCall"

<sup>&</sup>quot;Norman Rockwell – Suiting Up"

<sup>&</sup>quot;2001"

<sup>&</sup>quot;Buck Rogers"—all essays for a volume on the 50<sup>th</sup> anniversary of space flight as seen through the NASM collections

- "Life Among the Savidges," Air & Space Smithsonian (August 2010), 14-15.
- "The Oldest Powered Flying Machine?" Air & Space Smithsonian ((September 2010), 12-13.
- "Dangerous Crossing," Air & Space Smithsonian (November 2002), 16-18.
- "The Aero Club of Washington: Aviation in the Nation's Capital, 1908-1924," <u>Washington History</u> (2010: Vol. 21, No. 1), pg. 36-56.
- "Chauffeur of the Skies: Roy Knabenshue and the Gas Bag Era," <u>Timeline</u> (April-June, 2011), pp. 24-41.
- "NASA Art: Fifty Years of Exploration," Physics Today (August 2011), pp. 42-47.

Michael Neufeld and Alex Spencer, eds., <u>The National Air and Space Museum: An Autobiography</u> (Washington, D.C.: National Geographic Society, 2012), contirubiotns by Tom Crouch:

Chapter One: Flight and the Smithsonian

Chapter Four: The World's Most Popular Museum (with Ted Maxwell)

The Military Flyer

The Wright Smithsonian Feud

Robert Goddard

Cyrus Adler

Alexander Graham Bell

Enola Gay (with Dik Daso)

- "Buckeyes Aloft: Ohio People and Places in the History of Flight," Ohio Aerospace & Defence (Winter 2012)
- "Westward Ho! The First Flight From California to Hawaii," <u>Timelines</u> (April-June 2012, Vol. 29, No. 2), pgs. 42-53.
- "The Katzenjammer Kids Take to the Air," Air & Space Smithsonian (May 2012), 18-19.
- "The Aeronautic Society of New York and the Birth of American Aviation," <u>New York History</u> (Fall 2011), Vol. 92, No. 4, pgs. 269-289. (winner of Paul S. Kerr Prize)
- "Amelia Found?" American Heritage (Summer 2012 (Vol. 62, No. 2). Pgs. 48-55.
- "Charles A.A. Dellschau and the Dream of Flight," in Stephan Romano, ed., <u>Charles A.A.</u> <u>Dellschau, 1830-1923</u> (Seattle: Marquand Books, 2013), 62-71.
- "C.A.A. Dellschau: An Outsider Artist and the Dream of Flight," in Anne Collins Goodyear and Margaret Weitekamp, eds., <u>Analyzing Art and Aesthetics</u> (Washington, D.C.: Smithsonian Institution Scholarly Press, 2013), 168-186.

- "Channeling John Jeffries," Air & Space Smithsonian, August 2013 (Vol. 26, No. 3), 12-13.
- "The Beauty of Space, Times 3," Air & Space Smithsonian, August 2013 (Vol. 26, No. 3), 16-17.
- "Who Flew First?", Air & Space Smithsonian September 2013, Vol. 26, No. 4, pp. 25-26 "Lincoln's Air Force," Smithsonian Civil War: Inside the National Collection (Washington, D.C.: Smithsonian Books, 2013), pp. 108-111.
- "Tribes at War," <u>Smithsonian Civil War: Inside the National Collection</u> (Washington, D.C.: Smithsonian Books, 2013), p. 131.
- "Civil War Plans for Planes," <u>Smithsonian Civil War: Inside the National Collection</u> (Washington, D.C.: Smithsonian Books, 2013), pp. 263-265.
- "The Other War," <u>Smithsonian Civil War: Inside the National Collection</u> (Washington, D.C.: Smithsonian Books, 2013), pp. 271-273.
- "Wars In The West," <u>Smithsonian Civil War: Inside the National Collection</u> (Washington, D.C.: Smithsonian Books, 2013), pp. 352-353.
- "Harold Melvin Agnew (1921-2013)," Nature (November 7, 2013, Vol. 503, No. 7474), 40-41.
- "First Flight Photo," Air & Space Smithsonian (March 2014), 24-25.
- "Foreword," Gordon Murray, <u>Lost in Oscar Hotel: There is Something in the Air</u> (Kent, Ohio: Mirabis Books, 2014), pgs. 1-4.
- "Jumping Into History," Air & Space Smithsonian (June/July 2014, Vol. 29, No. 2, pgs. 20-21

Review of John Swinford, Airship Design, Development, and Disaster, in <u>Technology and Culture</u> April 2014, Volume 55, Number 2. <a href="http://muse.jhu.edu/journals/technology\_and\_culture/v055/55.2.crouch.html">http://muse.jhu.edu/journals/technology\_and\_culture/v055/55.2.crouch.html</a>

"Wheeling and Flying: How the Bicycle Took Wing," <u>Cycling 22: Proceedings of the International Conference on the History of Cycling</u>, Volume 22, 113-122

"From Bicycles to Human Powered Flight," <u>Cycle History 25: Proceedings of the 25t h annual</u> Cycling History Conference (Cheltenham, England: Cycling History, 2015) p. 60-70.

Review: Matthew D. Tribbe, No Requiem for the Space Age: The Apollo Landings and American Culture, in, Journal of American History (2015) Vol. 102, No. 1, 299-300. http://jah.oxfordjournals.org/content/102/1/299.2.full

"What Was the Most Significant Airplane Flight in History?" The Atlantic (July/August 2015,

Vol. 316, No. 1), p. 108.

"Review Essay: Blaming Wilbur and Orville," <u>Business History Review</u> / <u>Volume 89</u> / <u>Issue 02</u> / Summer 2015, pp 339 – 343

"High Fliers," Air & Space Smithsonian June-July 2015, Vol. 30, No. 2), 2.

"Momentos of the First Flights," <u>Air & Space Smithsonian</u> (September 2015, Vol. 30, No. 4), pp. 16-17.

"Neil Armstrong," biographical entry, American National Biography (Oxford University Press) <a href="http://www.anb.org/search?btog=chap&q0=neil+armstrong">http://www.anb.org/search?btog=chap&q0=neil+armstrong</a>

"Les années perdues des frères Wright: 1905-1908," François Lubert and Stephen Tison, <u>L'imaginaire de l'aviation pionnière: Caontribution l'histoire des representations de la conquête aerienne</u>, 1905-1927 (Rennes, France: Presses Universitaires de Rennes, 2016).

"First to Glide?" <u>Bungee Cord: The Voice of the Vintage Sailplane Association</u> (Vol. 4, No. 4, Winter 2015), pgs. 5-9.

"The Experiments of 1899: Wilbur and Orville Fly a Kite," <u>Discourse: The Journal of the Drachen Foundation</u> (November 2015), 35-45. <a href="http://www.drachen.org/sites/default/files/pdf/Discourse%20Issue%2021.pdf?bcsi\_scan\_2687365ababd2c82=0&bcsi\_scan\_filename=Discourse%20Issue%2021.pdf">http://www.drachen.org/sites/default/files/pdf/Discourse%20Issue%2021.pdf</a>?

Book Review: Dirigible Dreams: The Age of the Airship, <u>Air & Space Smithsonian</u> (March 2016, Vol. 30, No. 7), 76.

"Dreams of Navigating the Air," in Bart Hacker, <u>Astride Two Worlds: Technology and the American Civil War</u> (Washington, D.C.: Smithsonian Institution Scholarly Press, 2016), 205-244.

The Fairborn Kid," <u>Friends Journal: The Magazine of the Air Force Museum Foundation</u> (Spring 2016, Vol. 39, No. 1), pp. 8-11.

"Bleriot XI and Curtiss D-III Pusher." F.R. Van der Linden, A. Spencer and T. Paone, eds., Milestones of Flight, (NP: Zenith Pres, 2016), 22-20.

"Explorer II," F.R. Van der Linden, A. Spencer and T. Paone, eds., <u>Milestones of Flight</u>, (NP: Zenith Pres, 2016), 70-75.

"On the Shoulders of Giants: The International Roots of the Airplane," presented at a symposium on Early Flight, Deutsches Museum, October 2016

"Foreword," Ron Miller, Spaceships: An Illustrated History of the Real and the Imagined

(Washington, D.C.: Smithsonian Press, 2016), 7. Book review, I Choose the Sky, Air & Space Smithsonian (September, 2016),

The Flight Claims of Gustave Whitehead (Refereed Paper 01/05/2016) Journal of Aeronautical History (Royal Aeronautical Society), Vol. 2016, 9p., <a href="https://www.aerosociety.com/publications/jah-the-flight-claims-of-gustave-whitehead/">https://www.aerosociety.com/publications/jah-the-flight-claims-of-gustave-whitehead/</a>

"Oh the humanity," Foreword," Dan Grossman, Cheryl Ganz and Patrick Russell, <u>Zeppelin Hindenburg</u>: An Illustrated History of LZ-129(Stroud, Gloucestershire, 2017), pp. 7-8.

Book Review, Striking the Hornet's Nest: Naval Aviation and the Origins of Strategic Bombing in World War I, <u>Air & Space Smithsonian</u>. (July, 2017, Vol. 32, no. 2), p. 72

Foreword for David Nolan, <u>Discovery and Renewal on Huffman Prairie</u> (Kent, Ohio: Kent State University Press),

"Channeling John Jeffries," in <u>25 Famous Flights: Historic Firsts, Heroic Saves, Desperate Missions,</u> (Washington, D.C.: Air & Space Smithsonian, Winter 2017), pp. 12-13.

"The First Aerial Voyage in America," FAVIA (Philadelphia: Balloon Federation fo America, 2018), ...

"The Man Who Deserved to Fly: Laurence Hargrave, Octave Chanute and the Saga of Hargraves Aircraft No. 14," <u>Journal of Aeronautical History</u> (Royal Aeronautical Society, 2017 issue.) <a href="https://www.aerosociety.com/media/7861/the-man-who-deserved-to-fly-lawrence-hargrave-octave-chanute-and-the-saga-of-hargrave-s-aircraft-no-14.pdf">https://www.aerosociety.com/media/7861/the-man-who-deserved-to-fly-lawrence-hargrave-octave-chanute-and-the-saga-of-hargrave-s-aircraft-no-14.pdf</a>

Foreword for David Nolan, <u>Discovery and Renewal on Huffman Prairie</u> (Kent, Ohio: Kent State University Press, 2018), 1-2.

"To Spy Out the Land: Recreating Union Army Balloon Observations at Edwards Ferry," <u>Along the Towpath (June 2018)</u>, 1-5, <a href="http://www.candocanal.org/articles/balloon-edwards.pdf">http://www.candocanal.org/articles/balloon-edwards.pdf</a>

"The Wright Brothers and the Patent Wars, 1909-1915," <u>Journal of the Federal Circuit Court Historical Society</u> (Vol. 11, 2017) 7-48 (with appendices).

Film review, "The Millionaire's Unit: The First U.S. Naval Aviators in World War One," <u>Air & Space Smithsonian</u>, (March/April 2018).

Book review, Jason Weems, <u>Barnstorming the Prairies: How Aviation Shaped the Midwest</u>, <u>Journal of American History</u>(Winter 2017)

"John Whiten Van Cleve Goes to College: The Experience of a Pioneering Student at Ohio University," Under referee's review for publication in the journal Ohio Valley History

John Hershel Glenn, full entry for American National Biography, Oxford University Press:

"Like others we began with the helicopter: The Evolution of the Helicopter Toy," Paper presented at the International Conference on the History of Technology, St. Etienne, France, June 16, 2018.

"From Science Fiction to the Stars: The Evolution of the American Rocket Society," Paper HSP-01, 2962716, presented at the 2018 AIAA Space Forum and Exhibition, Orlando, Florida

#### Web Contributions:

A regular contributor to the NASM Blog

Tom D. Crouch, "Mr. Lincoln's Air Force," <a href="http://www.smithsonianconferences.org/2009/lincolnsairforce/">http://www.smithsonianconferences.org/2009/lincolnsairforce/</a>

#### OTHER PROFESSIONAL EXPERIENCE

I have been a professional museum curator, or a manager of curatorial operations for a quarter of a century. I have played a major curatorial role in opening three important museums: The Neil Armstrong Museum, The Ohio Historical Center, and the National Air and Space Museum. I have served as a department chair/assistant director at both the National Air and Space Museum and the National Museum of American History.

Over the course of my career, I have curated or supervised perhaps as many as a dozen important exhibitions. In addition to those museum displays focusing on the history of technology and the history of flight, I have scripted and planned several exhibitions exploring aspects of social and political history that have attracted national attention. I am especially proud of "A More Perfect Union: Japanese Americans and the U.S. Constitution," which opened at the National Museum of American History in October 1987 and remained in place for over two decades. .

#### HONORS AND AWARDS

1966-1968	Two full graduate fellowships, Miami University
1971	Inducted into membership in the Ohioana Library, an organization honoring Ohio authors
1973	Smithsonian Institution Dissertation Fellowship
1976	Smithsonian Institution Certificate of Award for Exceptional Service
1976	National Air and Space Museum, Certificate of Award for Exceptional Service
1976	American Institute of Aeronautics and Astronautics Award for the Best History Book Manuscript of the Year, <u>A Dream of Wings: Americans and the Airplane</u> , 1875-1905 (New York: W.W. Norton and Co., 1980)

1977-1978	American Institute of Aeronautics and Astronautics, Distinguished Lecturer
1979	Aviation/Space Writers Association Award for Literary Merit, <u>Apollo XI:</u> <u>Ten Years Since Tranquility Base</u> (Washington: Smithsonian Institution Press, 1979)
1980-1984	American Audio-Visual Society and the Independent Film Producers Association. Various awards for film scripting, including: <u>Early Flight:</u> A Film for the National Air and Space Museum, (1981); <u>Balloons and Airships</u> , filmstrip (1982); <u>Treasures of the National Air and Space Museum</u> , film (1984)
1984	Aviation/Space Writers Association, Best Non-Fiction Book of the Year, Eagle Aloft: Two Centuries of the Balloon in America, (Washington: Smithsonian Institution Press, 1984)
1985	Smithsonian Institution Certificate of Award for Exceptional Service
1987	National Japanese American Historical Society, Certificate of Appreciation for Dedication to Justice and Historical Accuracy
1987	Japanese American Citizens League, Certificate of Award for Work on exhibition "A More Perfect Union: Japanese Americans and the U.S. Constitution
1988	United States Information Agency, Certificate of Appreciation for Participation in US-USSR Bilateral talks on cultural cooperation, Moscow, October 1988
1989	The Christopher Award, a national literary prize honoring works of "significant literary merit representing the highest values of the human spirit, for, The Bishop's Boys: A Life of Wilbur and Orville Wright (New York: W.W. Norton and Co., 1989)
1990	Ohio University, College of Arts and Sciences, Significant Achievement Award: Distinguished Alumnus
1997	Ralph S. Barnaby Memorial Lecturer, National Soaring Society

1998	Wright Brothers Memorial Lecturer, NASA Langley Flight Research Center, Wright Brothers Memorial Lecturer, NASA Langley.
1999	Awarded Senior Member Status, American Institute of Aeronautics and Astronautics
2000	Appointed by President Clinton to membership on the First Flight Centennial Federal Advisory Board
2001	Appointed by President Clinton to Chair the First Flight Centennial Federal Advisory Board
2003	Re-appointed to Chair, FFCFAB by President George W. Bush
April 2001	Trailblazer of the Year Award, Aviation Trail Foundation, Dayton, Ohio
June 2001	Doctor of Humane Letters, Wright State University
2002	Smithsonian Distinguished Research Lecturer Award for 2002
June 2003	San Francisco Aviation Society, Aviation Man of the Year
June 2003	Aerospace Medical Association, Bauer Lecturer for 2003
July 2003	University of Texas at Dallas, The George W. Jalonick III and Dorothy Cockrell Jalonick Memorial Distinguished Lecturer for 2003
October 2003	United States Air Force, Harmon Lecturer for 2003 (The most important lecture offered annually at the US Air Force Academy)
2003	William F. Shea Distinguished Contribution to Aviation Award, University of Nebraska, Omaha
2003—Present	AIAA Distinguished Lecturer
2003	Gardner-Lasser Aerospace History Literature Award, from the American Institute of Aeronautics and Astronautics, honoring the best book on aerospace history published in the last five years, for, <u>Wings: A History of Aviation From Kites to the Space Age</u>
September 2006	Inducted into the Wright-Dunbar Walk of Fame, Dayton, Ohio
October 2006	Inducted as a Caballero of the Orden Merito Santos-Dumont by the Brazilian government.
September 2007	Elected an Associate Fellow of the American Institute of Aeronautics and

### Astronautics

February 1, 2008	Named an Honorary Member of the Engineer's Club of Dayton, Ohio
December 17, 2009	The Col. "Red" Smith Distinguished Service Award for 2009, First Flight Society, Kill Devil Hills, NC
March 2010	<u>First Flight</u> wins the National Park Service Play-off, a competition to select the best and most popular handbook in the National Park Service series.
November 2011	Named to list of 100 Top Buckeyes to Know, by the Ohio State University Alumni Association
June 2012	Paul S. Kerr History Prize for – "The Aeronautic Society of New York and the Birth of American Aeronautics, 1908-1918" – Pau; S. Kerr Prize given by the New York State Historical Association for the best article of the year published in New York History.
November 2013	Smithsonian Secretary's Award for Collaborative Spirit – to the team creating <u>The Smithsonian Civil War: Inside the National Collection</u>
November 2013	Elected a Fellow of the American Institute of Aeronautics and Astronautics
March 2014	Paul E. Garber Award for contributions to the history and culture of kiting in the Washington D.C. area.
March 2016	AIAA Member of the Month
June 2016	American Institute of Aeronautics and Astronautics Distinguished Service Award for 2016

Short Vita

Tom D. Crouch

60 Brookline Drive Charles Town, WV

e-mail: croucht@si.edu

Tom Crouch is Senior Curator of the Division of Aeronautics at the National Air and Space Museum. A Smithsonian employee since 1974, he has served both the National Air and Space Museum (NASM) and the National Museum of American History (NMAH) in a variety of curatorial and administrative posts. Prior to coming to the Smithsonian he was employed by the Ohio Historical Society as director of education (1969-1973) and as Director, Ohio American Revolution Bicentennial Advisory Commission. (1973-1974).

Tom Crouch holds a BA (1962) from Ohio University, an MA (1968) from Miami University and a Ph.D. (1976) from the Ohio State University. All of his degrees are in history. In addition, he holds the honorary degree of Doctor of Humane Letters, conferred in June 2001 by the Wright State University.

He is the author or editor of a number of books and many articles for both popular magazines and scholarly journals. Most of his work has been on aspects of the history of flight technology. Some of Crouch's books include: The Bishop's Boys: A Life of Wilbur and Orville Wright (New York: W.W. Norton, 1989); Eagle Aloft: Two Centuries of the Balloon in America (Washington, D.C.: The Smithsonian Institution Press, 1983); Wings: A History of Aviation from Kites to the Space Age (NY: W.W. Norton, 2003); A Dream of Wings: Americans and the Airplane, 1875-1905 (New York: W.W. Norton, Inc., 1981); Bleriot XI: The Story of a Classic Airplane (Washington, D.C.: Smithsonian Institution Press, 1982); and Rocketeers and Gentlemen Engineers (Reston, Va: AIAA, 2006), and Lighter-Than-Air: An Illustrated History of Balloons and Airships (Baltimore: The Johns Hopkins University Press, 2009).

Tom Crouch has won a number of major writing awards, including the history book prizes offered by both the American Institute of Aeronautics and Astronautics and the Aviation/Space Writers Association. He received a 1989 Christopher Award, a literary prize recognizing "significant artistic achievement in support of the highest values of the human spirit," for The Bishop's Boys: A Life of Wilbur and Orville Wright. His book, Wings: A History of Aviation From Kites to the Space Age, won the AIAA Gardner-Lasser Literature Prize for 2005, an award presented to the best book selected in that year from all books in the field of aerospace history published in the last five years.

Throughout his career, Dr. Crouch has played a major role in planning museum exhibitions. He was involved in planning exhibitions for the Neil Armstrong Museum, Wapakoneta, Ohio; the Ohio Historical Center, Columbus, Ohio; the National Air and Space Museum; the National Museum of American History; and the Stephen F. Udvar-Hazy Center of the National Air and Space Museum.

In the fall of 2000, President Clinton appointed Dr. Crouch to the Chairmanship of the First Flight Centennial Federal Advisory Board, an organization created to advise the Centennial of Flight Commission on activities planned to commemorate the 100<sup>th</sup> anniversary of powered flight.

Tom Crouch has been married to the former Nancy Anne Gochenouer for more than forty years. They are the parents of three grown children and the grandparents of Emma and Alex.