

CENTRAL PENNSYLVANIA TORCH CLUB MINUTES (10 September 2014)

President Stephen Smith called the meeting to order at 6:50 p.m. Art urged the members to bring more guests who might be prospective members. Treasurer Lee Stout reported that the treasury has \$2434.51, about \$10 less than a year ago. He reminded the members to pay their annual dues. Frank Deutsch introduced Amit Das, who has attended several meetings and is now a candidate for membership. Upon Frank's nomination, the members voted him into the Club unanimously.

Smith invited attenders to relate interesting things they did over the summer. John Vincenti took a two-week land and sea tour of Alaska, later went to Ireland for the Penn State-University of Central Florida game. Steve also attended that football game took a two-week tour of Ireland. Amit went to the Finger Lake and Martha's Vineyard. Frank Deutsch attended the weddings of two of his grandchildren. Mick received toured the California coast from LA to SF. Art and Gordon both went to the Chautauqua Institution, but on different weeks. Gordon went to Boston and will attend the wedding of one of his grad students in Minneapolis. Marylee spent part of the summer in California's Contra Costa and Trinity Counties. Dave's daughter graduated from college. A guitar player, he did some traveling around the Nashville area. Lee attended several high school and college graduations and had cataract surgery. Roy spent a lot of time in Minnesota. Dean and his wife have bought property in Florida and spent some time fixing it up, also went to Austin, Washington state, and Idaho. Mark is planning to travel to the Bahamas on Monday.

News of members: Rex Warland, having undergone cancer treatment successfully, hopes to come back soon. David saw Ed Buss at Dorothy's 90th birthday party and reports they will soon move to Foxdale.

John delivered a photographic lecture on the IATC convention at Brock University, St Catharines, Ontario, during which he described Brock University and its campus amenities, the University's namesake Sir Isaac Brock, who died in the battle of Queenston Heights fighting for his country, its University's controversial metal artwork entitled "She Wolf," the architecture and international character of St Catharines, our tour buses, places he visited, Ontario's wine country, the Welland Canal and its locks. He recommended Joey Feta's Greek Restaurant and Niagara-on-the-Lake's Shaw Festival, drugstore, and shops. He reported on the session he attended and the administrative acts passed by voting members, mainly the new family membership plan (which John sent to all members after his return), the new IATC officers, and two of the talks (the ones about China's future and about Canada's treatment of its First Nations). John showed a photo of the new officers and announced the 2015 convention in Lincoln, Nebraska, and the 2016 one in Columbus, Ohio.

Afterwards Art briefly shared his observations and experiences at the convention, especially the session on member recruitment and retention, for which he prepared a handout of the main pointers for clubs, and also, at a member's request, speculated about Obama's possible strategies for the Middle East.

The meeting adjourned at 7:40 p.m. Our next meeting will be on 8 October, when Steve Smith will talk about traditional agriculture in tropical Latin America.

Respectfully submitted, Art Goldschmidt, secretary

CENTRAL PENNSYLVANIA TORCH CLUB MINUTES (8 October 2014)

President Stephen Smith called the meeting to order at 6:45 p.m. Under the family membership plan approved by the IATC, Louise Goldschmidt and Michelle Smith, who had come as guests, were proposed and accepted as members by acclamation. Members were invited to report on trips they had made since our last meeting: Marc Meckstroth to Macchu Pichu and the Galapagos, Gary Miller to Maine, and Amit Das to New York. John Vincenti distributed his brochure. Gary, acting membership chair until someone can be found to serve, offered some questions and proposals on recruitment. Must a potential member be nominated by a member, or can s/he initiate an application? How can we advertise? Members felt a prospective member should contact the president, or another designated officer. S/he may come but must notify the secretary to order the right number of dinners in advance. Gary urges us to invite spouses to join, write a press release to the local paper after each meeting, have each speaker post a brief summary of his/her talk on our Web site, invite members of other groups to attend when the talk relates to their interests and urge them during the dinner or after the talk to consider joining, and offer a free dinner to any member who brings at least three guests during a year. We may have a guest night, or host a special reception, make lists of potential candidates, and invite outside guests to speak to our club. Steve will convene our Executive Committee, but all of us may initiative proposals on recruitment.

Steve gave a PowerPoint lecture about traditional tropical agriculture in Latin America. He and Michelle have extensive field experience in its rural areas, notably Peru, Venezuela, and Costa Rica. They went to a jungle research station on the Upper Amazon and the Napo Rivers. Traditional agriculture is an indigenous form of farming, with a high level of ecological rationale, using local knowledge and natural resources to manage agrobiodiversity, maintain spatial and temporal crop diversity, optimize crop mix-tures for space and environmental resources, recycle nutrients, conserve water, manage resources wisely, control crop succession, protect against insects and other pests, reduce risk, stabilize and secure yields, optimize diet, suit local culture and ritual, and best utilize the local environment. Indigenous farmers layer their crops, mimicking natural forest patterns, and may make skillful use of the slash-and-burn technique (plant ash can fertilize the soil). His pictures showed how motorcycle taxis serve in cities (e.g., Iquitos) and on narrow rural roads; houses built on river banks and inland houses on stilts to withstand annual floods; long dugout canoes, used for fishing and transport, with a tiny motor in back, operated by adults and children; a woman grills a coati over a log fire on a metal floor; crops are planted in layers near the river bank, thus mimicking forest progression; reeds are cut and spread on the banks, so that when the river floods, the dried reeds harbor fish that are easily caught; how cassava is raised, quickly before the flood, or stored in the ground for a long time; how a long stick serves as a lever to pull out the cassava root, whose poisonous cyanic acid must be removed before it is cooked, ground into a powder, or brewed; and bananas and even rice are raised in the river valley. Most farmers are small landholders. They complain of low crop prices and high prices for inputs, and how schooling causes young people to shun traditional farming. Fishing for small piranhas, he caught and grilled some, and they tasted good. Boas are ubiquitous. He illustrated traditional and modern, large-scale and small-scale slash-and-burn techniques, which may cause erosion. Once a field is cleared, the farmers grow a succession of crops over a 2 to 3-year period, then let the land go fallow, following a 7 to 12-year cycle. Leaving land fallow presupposes a low population density. Shifting to Costa Rica, he showed ornamental plants raised for the international market, banana trees grown to shade coffee plants, or at times beans. He showed an ancient irrigation system in Peru's high desert in the Nazca region, carrying water from a mountain source in stone-lined ditches, an "eye" every few meters, cleared of weeds by small children, and still used.

The meeting adjourned at 7:55 p.m.

Respectfully submitted, Art Goldschmidt, Secretary

CENTRAL PENNSYLVANIA TORCH CLUB MINUTES (12 November 2014)

President Stephen Smith called the meeting to order at 6:50 pm and introduced his guest, Gary Herbert. Frank Deutsch introduced his wife Mary and her friend, Judy Gunberg. Dean Snow introduced his wife Janet, and Roy Hammerstedt introduced his wife Susan. The club welcomed Rex Warland back. Several members reported on recent travels or books they had read. Steve suggested that the Club buy its own projector for PowerPoint presentations, the members voiced assent, and he will look into projectors and their cost. He will report back in December. He spoke about two handouts, one from the IATC and the other from Gary Miller, regarding new member recruitment. We need to elect a membership chair. We will publicize our meetings in the *Centre Daily Times*, *Centre County Gazette*, and *Voices of Central Pennsylvania*. He then introduced Roy, who gave a paper on Ponzi Schemes: How Many Affect You?

Carlo Ponzi, originally Italian, carried out several financial schemes, e.g. the international reply coupons that could be redeemed for postage stamps, based on differential exchange rates between foreign postal services. Of course, schemes like this go back in time to the earliest settlements that were large enough that one person couldn't know everyone else. They commonly grow out of envy, when a few have a lot and the rest wish they did, most often during economic booms. There are natural "bubbles" and then there are "scams" or camouflaged pyramid schemes, not always intentional. One knows the scheme will fail but cannot predict the moment of implosion. People are drawn in, believing that they will win, even though everyone understands it is a collective folly. They imitate the behavior of other people in matters they don't understand. In mathematical terms, $p = s - c > 0$ (profit occurs when the sale price minus the cost is greater than zero). With three variables, you can do anything. But if you stop getting timely infusions of new money, the scheme collapses. Only the early participants gain. Graph illustrated how participants increase geometrically for a while, but the rate of increase slows down and eventually reverses. He cited some recent American examples, e.g., Bernie Madoff's investment scam.

One possible example is Herbalife, a global nutrition company, with 3.7 million members in 90 countries. But members must buy several thousand dollars' worth of shakes and supplements before they get any bonuses. The firm has lasted 34 years; so far new investors have bought in as others have sold out. Tupperware, which also uses an independent sales force, is legitimate; Amway, too, probably. As a rule of thumb, a distributor must sell 70 percent of the products he bought within a month. He should sell at least one product to ten different customers in that month. In some cases, however, the distributor may want to consume some of the product and/or develop a network of buyers for another product. A new worker may be lured by stock options, the chance to get ownership shares as part of his pay, as in some Silicon Valley firms. Presumably he understands the risk, but what about the advice some academic departments give to incoming graduate students regarding their chances of academic appointment on receiving their doctorates? The Pennsylvania Lottery, Social Security and Medicare, and some state retirement systems make promises on assumptions about the future that may not be realized. Over time, both deceptive schemes and methods of detecting them have grown more sophisticated, notably in a world where people don't know one-another and investments are increasingly hard to understand.

To conclude: "If it sounds too good to be true, it is." In the ensuing discussion, involving at least eight Club members, other investment schemes were analyzed, including WorldCom, Enron, Arthur Andersen, and Bitcoins. Nutritional supplements are a common product, as they are unregulated and, in some cases, dangerous. A few "Ponzi schemes" are started by well-intentioned people. One member objected to including government programs like Social Security in this category. Several members talked about academic departments that mislead graduate students.

The meeting adjourned at about 7:50 pm.

Respectfully submitted, Art Goldschmidt, secretary

CENTRAL PENNSYLVANIA TORCH CLUB MINUTES (10 December 2014)

President Stephen Smith called the meeting to order at 6:45. Pete Cole introduced his daughter Cynthia Matly, and son, Jim Cole; Jim Serene his guest, Brian Dempsey, and Roy Hammerstedt his two guests, Jim Shore and Allen Phillips. Amit Das told about his recent trip to South Africa, notably Cape Town, Robben Island, and a safari; John Vincenti just saw the Rockettes in NYC and ate in Carmine's and Star Dust Diner; Steve Smith described his visit to San Antonio and the LBJ Ranch. Art announced the IATC Convention in Lincoln, Nebraska, in June 2015. Steve reported on efforts to recruit new members. Gary Miller wrote a brief account of our previous meeting in an article that was printed in the *Centre County Gazette*. Art circulated a sympathy card for a relative of Cliff Bastuscheck, a long-time Club member and treasurer, who died on 25 November. John Vincenti offered to email important news to Club members. Steve announced that Amit Das and Gary Miller have exchanged their program dates. He introduced Pete Cole, who spoke on managing the world's fishery resources, especially cod in Gloucester, Mass.

Pete became interested in Gloucester when he was teaching at UMass/Amherst. Its fishery is a part of a broader problem of declining world fish resources. The reported catch is rising and the estimated supply of potential seafood is declining. However, the available statistics are highly unreliable. Farm fishing is rising, especially in SE Asia, northern South America and China most of all, and is very profitable. Most fish go for human consumption, but some is used for fertilizer, fish oil and animal feed. Fish prices are rising and its quality declining. He cited some Wegmans prices: wild Pacific halibut costs \$28.95/pound. Tilapia, which is farmed and increasingly popular, is cheap, but bland. The world's fish consumption is rising faster than its population. In 2011 global consumption was about 19.2 kilograms per capita. He talked about efforts to regulate fishing. The Marine Stewardship Council goes to fisheries to document their route from the fishery to the store, but not all fish are inspected. Consumers can judge trout or salmon, but other fish are hard to assess and there is no grading system. Fishing in Gloucester and other ports goes back to colonial times. The Treaty of Paris (1783) delimited fishing rights between the US and Canada, with actions after the War of 1812.

The US government got involved only after Civil War. Its first laboratory at Woods Hole opened in 1875. Its National Marine Fisheries Service, since 1975 a branch of the National Oceanic and Atmospheric Agency, regulates fishing beyond the historic three nautical mile limit. These waters were international and open to anyone wanting to fish there. The Coast Guard, Navy, Homeland Security, EPA, but especially the NMFS now patrol the fishing areas. The US and Canada had a functional agreement on North Atlantic fishing from about 1950 to 1975, when it broke down. The UN has passed four conventions on marine waters, including fishing rights. The Magnuson-Stevenson Act set up eight councils to formulate plans regulating the harvest of 478 species of edible fish, and several bills are now before Congress to revise the rules. Pete wanted to serve on a council and was twice named an alternate, which surprised him as he had no business sponsor. The Councils' efforts to set limits on fish size and numbers have led to many protests. It is hard for the Councils to count fish in lakes, harder in large bodies of water and even harder to break down a catch into species. When they make a "virtual population analysis" they often err. Losing its fishing industry has cost Gloucester and other fisheries billions, and will worsen. What can they do with beautiful old homes, supply houses for nets and other fishing gear, an ice plant, and a boat ramp when fishing vanishes? Questions were asked about the effects of climate changes and catastrophic storms; changing currents affecting food supply for fish, fish hatcheries in Gloucester, loss of halibut, mercury in fish as a health threat, what goes into Omega 3 capsules, rising price of anchovies, low rate of intake increase relative to variable population growth by region, fisheries' disappearance on Lake Superior, zebra mussels, effects of water pollution, Gloucester's future, shellfish, notably scallops. Recommended reading Kurlansky's *The Last Fish Tale*.

Meeting adjourned 7:50. Attendance: 19 (14 members, 5 guests). Next month: Marylee Taylor.

Respectfully submitted, Arthur Goldschmidt, secretary

CENTRAL PENNSYLVANIA TORCH CLUB MINUTES (14 January 2015)

President Stephen Smith called the meeting to order at 6:45 pm. Frank Deutsch introduced his wife, Mary, and Gordon DeJong his wife Caroline. Ed Buss wrote to Steve, explaining why he has missed so many meetings, hoping to attend more in the future, and will be able to attend the IATC convention in Lincoln, Nebraska. Steve announced a schedule change: Gary Miller will speak in February, Amit Das in March. Gary has invited Dave Phillips and Laura Miller (WPSU director of marketing) to attend his talk.

Steve introduced Marylee Taylor, who distributed a handout on the General Social Survey, which has charted American beliefs and attitudes since 1972. Funded by the National Science Foundation and conducted by the University of Chicago, its researchers conduct face-to-face interviews, an increasingly uncommon practice, owing to the expense, but more reliable than mail, phone, or email surveys, with a representative cross section of American adults, chosen by cluster sampling. Response rates hover around 70 percent. The GSS pretests questions in an attempt to avoid wording that could prejudice results. Questions assessing racial stereotyping were carefully constructed to minimize “political correctness” influence. Sample sizes for the individual annual and more recent biannual surveys have ranged from 1372 to 4492. Across the 1972-2012 surveys, the total number of 56,860 respondents. A question added in 2010 measured the presence or absence of different races in each respondent’s family. A surprisingly large percentage of non-Hispanic whites reported American Indian relatives, perhaps a result of the civil rights movement or an enhanced value for diversity. Only 44 percent of the non-Hispanic white GSS respondents claim not to have any other racial groups in their extended families, whereas 56% believe they do.

Focusing on non-Hispanic white respondents, the speaker noted differences between self-identified Christians and “nones,” those claiming no religion (a group that has risen from 7% in the 1970s to 19% in 2010-12). Christians as a group show somewhat less generous attitudes than “nones” toward poor and black Americans. The changing nature of civil life may account for an overall decline in interpersonal trust from 1972 to 2012. Surveys from 1994 on show women to have slightly less trust of “most people” than men do, while blacks and Latinos show dramatically higher levels of distrust than non-Hispanic whites, perhaps because of income inequality, neighborhood segregation, and discrimination. The GSS shows rapidly rising acceptance from 1988 to 2012 of gay marriage. In large part this may result from more people coming out, and the rest of the population discovering that cherished friends and family members are gay. Scores on liberalism show a gap almost three times wider now than in the 1970s between Democrats and Republicans. US parties have changed their stances dramatically in history. Blacks are less negative than whites toward immigration and its perceived effect on economic growth. The GSS should assess attitudes toward Muslims, who are growing in proportion to the population. An earlier survey in greater Detroit showed negative views of Muslims. Most Americans believe that incomes are too unequal. Blacks and Latinos are more hopeful than whites regarding a higher living standard for the next generation. Blacks are less likely to own guns, more apt to have been shot at, and more in favor of gun control.

Questions: do private survey groups gather data as reliable as the GSS? How much do policy makers rely on their findings? Do we have comparable data on other countries’ attitudes? Discussion alluded to Australia, Europe, and the Arab countries. One member recalled an American survey revealing that 90 percent of respondents think they are “above average.” Academics, but also the popular press and political strategists, use these data. The meeting adjourned at 8:07 p.m. 17 attended, of whom 15 are members. Gary Miller will speak on 11 February about “Fifty Years of Public Television.”

Respectfully submitted, Art Goldschmidt, secretary

CENTRAL PENNSYLVANIA TORCH CLUB MINUTES (11 February 2015)

President Stephen Smith called the meeting to order at 6:50 p.m. Roy Hammerstedt introduced his guest, Ming Tien, a biochemistry professor and business entrepreneur. Gary Miller introduced Laura Miller, director of marketing for WPSU. Steve reported that our club has bought a projector for \$380 for use at meetings and then introduced Gary Miller, speaking on “Fifty Years of Public Broadcasting,” aided by Dave Phillips, a former member of our club, who served as WPSU director of operations and general manager during its first twenty years.

Penn State pioneered in broadcasting educational programs, initially on radio in the 1940s. Ray Carpenter pioneered in the educational use of film. Penn State initially used on-campus television to teach large classes, using one-way video and two-way audio, for twenty years, notably in introductory accounting. In 1962 Congress passed the Educational Television Facilities Act, notable for funding K-12 use of television. In 1964 Penn State got a construction permit to start WPSX-TV. Early leaders included Marlowe Froke, Les Greenhill, and Art Hungerford. The new station was initially assigned UHF Channel 45, which did not work well in rural areas, so it switched to VHF, which had to be located more than 120 miles away from a competing channel, which is why the station transmits from Clearfield. A junior college in Northern Virginia already had the call letters WPSU for its radio station, so Penn States were initially WPSX. Broadcasting began in March 1965, mainly to schools in daytime only, and evening scheduling was authorized on 7 June 1965. Ten days later WPSX received its license as the nation’s 101st educational station. Lacking a studio, it used rooms in Wagner Building, then in Wagner Annex, plus a truck parked outside. Its first live program was the College of Agriculture’s “Farm, Home, and Garden,” followed by “State of the Weather, Shape of the World” (now “Weather World”). WPSX used two bulky black and white video cameras that took six men to use. To telecast Penn State football games it used the coaches’ film, but sparingly. Documentaries focused at first on central Pennsylvania and on sports, notably “TV Quarterbacks,” featuring Joe Paterno live.

WPSX tried to build bridges between Penn State and Central PA’s 29 counties, which have many small school districts. Marlowe Froke met with school superintendents and established the Appalachian Educational Broadcast Council so that the schools could select—and help fund the acquisition of—programs for use in the schools. Early offerings included Paul Welliver’s science program for grades 1-3 and “What’s in the News” for grades 4-6, which was later broadcast nationally. Adult education programs included sewing, parenting, wood carving, fly fishing, and formal telecourses, using Penn State faculty (some in conjunction with Pitt and Temple), e.g. accounting, business logistics, and science, technology and society. Community Service Project in the 1970s put out programs on local problems, sometimes working with local agencies. These included rural mass transit, food shopping, aging, such diseases as heart disease and cancer. Penn State faculty visited area libraries to speak in conjunction with these programs and get people involved. WPSX was aided by the Educational Radio and Television Center, renamed NET. The Eastern Educational Television Network linked WPSU with big city producing stations. In 1967 WPSX partnered with WITF (Harrisburg) in a weekly public affairs program. This helped to justify the development of PPTN, a network of seven Pennsylvania stations, a network of seven Pennsylvania Stations supported by state funds and external funding. PBS was formed in 1969, but Congress was slow to appropriate the funds needed for public television. Later WPSX used experimental satellites to deliver courses throughout the Appalachians until PBS shifted to satellite delivery of programs in 1978. National Teleconferences began in 1980, with the first program drawing on PSU faculty from Nuclear Engineering. Walter Annenberg gave \$150 million to fund high quality educational programs for adult learners. As cable television matured, a group of operators created PENNARAMA, a 24-hour, statewide delivery system managed by WPSX, as a second channel. In today’s digital world, WPSU-TV has three channels, as does the radio station. Government funding was initially generous, then declined as business firms and individuals took up the slack but is now starting to revive.

In the question period Laura Miller spoke on the commitment of past and present WPSU employees, enduring programs, Darlene Chronicles’ high ranking on YouTube, the new website to be launched 1 March, the station’s renaming as WPSU Penn State, and a new platform that enables viewers to send in comments and questions while a program is in progress. Club members asked how WDFM, a student station, evolved into WPSU; how

to access the subsidiary stations; the effect on WPSU of new cable channels; public television's role in training school children in STEM disciplines.

The meeting adjourned at 7:45. Amit Das will talk on "Ramanujan: India's Most Famous Mathematician" on 11 March.

Respectfully Submitted, Art Goldschmidt, Secretary

CENTRAL PENNSYLVANIA TORCH CLUB MINUTES (11 March 2015)

Steve Smith called the meeting to order at 6:53 p.m. Frank Deutsch introduced Mary. Amit Das just returned from India, saw Goa for the first time, and read *I am Malala*. Ming Tien was approved for membership unanimously. Art reported that recent issues of *Voices* and *Centre County Gazette* have printed articles about this club. Steve urged members to consider a new vice president for next year. Gordon DeJong will seeking paper presenters for 2015-16.

Steve displayed the club's new projector and introduced Amit Das, who spoke on the life and work of Srinivasa Ramanujan: India's greatest mathematician. He was born in 1887 in Erode where his mother's parents lived; father stayed in Kumbakonam, where he was a bookkeeper. Their house was permeable, and several of his siblings died in infancy. He showed his genius by arranging cooking pots in straight line but did not talk till he was 3. He was enrolled in a school for Vedic chants at age 5. Always curious, he posited that trigonometric functions could be related to an infinite series, long before he learned that Euler had proved it. He attended the town high school, where teaching was in English, and challenged his teacher in mathematics. He solved cubic equations, trig functions, and the value of π . He read Carr's *Synopsis of Elementary Results in Pure and Applied Mathematics*. He flunked out of two colleges because he was bored by subjects other than math, although abler than his instructors, solving problems in 3-4 steps instead of 12. Unable to find a job, he stayed home, but his father made only 20 rupees/month, too little to support him. Living off his parents and neighbors for 5 years, Ramanujan sat on a bench before his parents' house, filling notebooks with equations, discovering new formulae, even without contact with other mathematicians, learned journals, or societies, using his own system of notation and unable to tell if his proofs were right or wrong. He used math to explain the primordial God and other divinities, creating a theory of reality around zero and infinity. To cure his apparent insanity, his mother arranged his marriage to a girl of 9, Janaki, who shared his caste and econ background. They did not meet until their wedding day, which almost did not occur because the groom's family reached the bride's family house six hours late. Janaki had to learn domestic duties until she reached puberty.

He tried to sell his math textbooks from door to door, but no one understood them. Hoping to find a job, he went to Madras, where in 1910 he met an old school friend and showed him how quickly he could solve problems. The friend presented him to Rao, founder of India's first math society, who found him a scholarship in Madras to learn how to publish his papers and books. His first paper was returned 4 times as he did not show the precise steps he took to solve a problem, for as a poor student he was used to writing on a slate and skipping steps, so its readers could not understand his solutions, or the connections in his concepts. Once he found a job paying 30 rupees/month, he could finally live with Janaki. Until then she slept beside his mother and was treated like a domestic slave. The mathematicians in Madras recommended him to Cambridge, but his work was ignored until G.H. Hardy saw its intrinsic merit. Although Hardy too had been challenged, he earned an MA in 1903, then the highest degree in English universities. He was willing more than others to consider taking an Indian, then seen as like as a black man. In a letter to Hardy, Ramanujan admitted his lack of university education but displayed his efforts to solve math problems. Hardy tested them, solved some, and realizing his potential, wrote to officials in India to get him admitted to Cambridge. A Brahmin, he could be ostracized for crossing the seas, eating beef, or removing his sacred thread. His first offer was withdrawn. Neville met him, read his notebooks, and said: "No Englishman would understand it; and no Indian could be trusted with it." Then his mother saw in a dream her primary goddess, who told her not to stop him from traveling overseas. He too saw the goddess. Cambridge offered him a £250 scholarship plus money for his passage and western style clothes. His wife could not accompany him. He could only don trousers after parting from his wife and mother. During his passage he got seasick, could not eat, and suffered from the heat. When he arrived in Apr 1914, he had never seen Englishmen doing manual labor, worn a necktie or shoes, used cutlery, or slept in a blanket. While living in Cambridge rooms, he cooked his own meals, worked on problems daily, filled his notebooks with 3,000 theorems, and attended lectures on elliptical integrals. One day he wrote on a blackboard results that the professor had not proven yet. Hardy had never met his equal. When WW I broke out, rationing began, street lights were blacked out, wounded soldiers filled every hospital, and many instructors left for the front. His clothes inadequate for England's chill, he wanted to return to India but could not because of the German U-boats. He graduated and

published first English paper in 1916. His scholarship was extended, but he felt isolated socially, for he had a strict diet of rice, yogurt, raisin, and lentil soup, wore a dhoti and followed Hindu rituals. Once he invited English guests, but the women refused to eat second helpings of the food he served, so he felt hurt & insulted. He studies partitions: different ways of adding up numbers.

He became ill in spring 1917. Told he was suffering from an incurable disease, he entered a nursing home. The war prevented him from returning to India when he learned of trouble back home from his mother's letters. When denied acceptance as a Fellow of Trinity College in Oct 1917, he became dejected and entered Matlock. But then elected to membership in London Math Society and was nominated in Jan 1918 to become a Fellow of the Royal Society for distinction in pure mathematics, a huge honor, but he wasn't told. Dispirited, he throw himself before a train, which barely stopped in time. Of 104 nominees he was one of 15. His health declined, for he could not eat the food served to him. Reconsidered for College fellowship, he still encountered resistance as a "black man" but denying his fellowship would have been scandalous, so he finally was admitted. He moved to London, where his health improved. In Oct 1918 his paper was read at London Philosophical Society. After the war ended, he was proposed for a post at Madras University. He returned to India with leather bag full of his papers. Seeing the number 1729 on his cab, he remarked it was the lowest number that could be the sum of two different cubes. Reaching Madras in April 1919, he was reunited with his wife and could have lived with her, had he undergone a purification ritual at Rameswaram, but was too sick to go there. He had a final flurry of creative and original work on mock beta functions, writing 650 formulas in his notebooks, which Penn Stater George Andrews studied 50 years later. He lapsed into coma on 26 April 1920 and died two days later. Most orthodox Brahmins boycotted his funeral. His widow had to supplement her income by sewing clothes. An Indian stamp honoring him was issued in 1962. Many scholars have struggled to describe his greatness. Amit and his wife just visited the area where he lived. Questions about his notebooks and religion followed.

The meeting adjourned at 8:10.

Respectfully submitted, Art Goldschmidt, secretary

CENTRAL PENNSYLVANIA TORCH CLUB MINUTES (8 April 2015)

President Stephen Smith called the meeting to order at 6:40 p.m. Art urged members to invite guests to the next meeting(s). Gordon DeJong will line up speakers for the coming year. The Club must elect a new vice president. Steve welcomed Ed Buss back. Jim Serene and his family rode bicycles from Miami to Key West and back.

Art Goldschmidt toured the Newseum in Washington, DC. Steve introduced Lee Stout, who spoke about his book, *Ice Cream U*, made possible by Eleanor Smith, granddaughter of an early Creamery supervisor. He showed a 1759 map of eastern Pennsylvania, when it was the breadbasket for the Colonies, leading in grain production, hence flour and bread. By the 19th century cereal production shifted to the Northwest Territory states, so many Pennsylvania farmers shifted to mixed agriculture, mainly dairy, meaning butter and cheese, the processing of which was done by wives and children. The market for fluid milk grew up later, and ice cream even later, when mechanical refrigeration became available. Preservatives for milk included formaldehyde and other substances, so few people drank it or viewed it as conducive to good health. Ice cream was a luxury, mainly served in homes of the wealthy or powerful. It was more like a gelato. The cranked ice-cream maker was patented only in 1843. Instruction in dairy management began later, mainly after the 1862 Morrill Land Grant Act. The idea of adding science to agriculture was new. The Farmers High School (which became Penn State) began offering classes in 1859, a pioneer in agriculture teaching, along with Michigan State and Cornell. A discourse followed on differing agriculture schools in the Northeast, as compared with the purposeful foundation of agricultural colleges such as Ohio State, Purdue, and Illinois. By the 1880s, however, engineering became Penn State's dominant subject, and by 1900 three fourths of its students were enrolled in the School of Engineering.

The first Dean of Agriculture, Henry Armsby, an animal nutritionist, was a pioneer scientist who wrote the basic book on cattle feeding. He set up experimental stations, research bulletins, correspondence courses (via the Chautauqua Institution), and short courses for farmers, typically two weeks). Penn State offered its first course in ice cream making in 1892, the first course of that type anywhere. Its first dedicated creamery building was erected in 1894 for scientific work in dairy husbandry. By 1903 dairy ranked first among PA agricultural products, leading to the construction of Patterson Hall, with laboratories. Penn State had to buy milk or cream from 300 farmers to supply its research and production needs. In 1932 Penn State opened Borland Lab as a state-of-the-art dairy science building, containing labs and classrooms. There was no large dining hall; most male students ate in downtown restaurants. There was less campus demand for dairy products than now, but Borland did have a sales room on its second floor. Penn State also delivered dairy products throughout Centre and parts of Blair County. Commercial dairies resented this competition and lobbied to eliminate off-campus sales by 1959. As Penn State's enrollment increased, it began housing and feeding more students, leading to demand for dairy products in dining halls and union bldg. snack bars. In 1961, however, it opened the Creamery sales room adjacent to Borland. Now Penn State has the Rodney A. Erickson Food Science Building, with 25,000 sq ft of floor space for classrooms, offices, and labs, with the Berkey Creamery, three times larger than its predecessor, on the first floor, convenient to Beaver Stadium and the Arboretum. Behind it are the production area and test facilities, with equipment worth \$7 million. Penn State enjoys a worldwide reputation as best place to learn how to make ice cream. Annual production: 310K gallons milk, 60K lbs yogurt, and 225K gallons of ice cream. The Creamery sells more than 750K cones & dishes. All this could have been lost in the 1980s, as Borland suffered from its obsolete equipment, getting negative warnings from health inspectors, and proposals to close the Creamery.

At first Penn State tried to raise funds to renovate the Creamery but decided it needed a whole new building. Erickson cost \$48 million to build. Tom Palchak supervised its planning and also strove to raise ice cream production by a factor of 2.5 times. No one but Bill Clinton has ever gotten two ice cream flavors on one cone; Lee surmised that he couldn't decide and the awestruck server behind the counter panicked. It is amazing that Penn State can retain the Creamery, whereas even the University of Vermont had to close its dairy store, and only fifteen remain. Though Penn State no longer has a dairy science department, it maintains its ice cream short course, drawing people from all parts of the world. Dairy production has consolidated. More research moneys come from scientific firms than the Department of Agriculture. The Creamery ranks second only to football in the minds of Penn State alumni. Only a third of the world's people can digest dairy products. Most live in areas

conducive to herding animals, mainly northern and western Europe. Dairy consumption leads to efficient land use, more frequent childbirths, higher population density, better organized societies, more specialized labor, and larger armies. The ALA listed Lee's book as one of the ten best university press publications of 2010. Discussion ensued: Why is ice cream popular in areas where most people are lactose intolerant? Does the Creamery's income benefit the University? Are the short courses mainly in winter? Do they attract entrepreneurs more than farmers? How has consolidation of departments into Animal Science affected Dairy Science? What about businesses that compete with Penn State? How does PSU compare with other creameries? Association of University Creamery Managers has a list, but some may not make ice cream. Dairy owners strive to find fresh ideas to stay in business? Agricultural coops play a growing role in milk production; they sell to powerful buyers like Wal-Mart or Target. How will water shortages, e.g. in California, affect cattle raising?

The meeting adjourned at 7:45 p.m.

Dick Held will speak next month on the Characteristics of Successful Small Businesses.

Respectfully submitted, Art Goldschmidt, secretary

CENTRAL PENNSYLVANIA TORCH CLUB MINUTES (13 May 2015)

President Stephen Smith called the meeting to order at 6:45 p.m. Art Goldschmidt announced the death of member Jack Hargleroad (condolences may be sent to one of his children: John Hargleroad, Karen Clautier, or Janet Snyder, using his Foxdale address: 500 E. Marylyn Ave., #F-89, State College, PA 16801) and Ed Buss's stated plan to attend this year's IATC convention. Our club will need a new vice president soon. Roy Hammerstedt introduced his guest, Robert Igo, who has chaired the Harris Township Planning Commission, held executive posts at Murata Manufacturing Co, and currently manages grants and contracts for Penn State Outreach.

Steve introduced Richard Held, who spoke about "Characteristics of Successful Small Businesses." Having served as a consultant to 200 businesses in Pennsylvania, Dick's study considers what 13 of them have done that caused their success. He described his sample, classified by industry, success type, type of ownership, by whom they were started, and (in the case of non-family businesses) their management structure. All got off to a good start, even though their capital in no case exceeded \$400,000, gaining rapidly, without major losses and with large early orders. Three of the firms studied refocused their business on something else. Almost always reinvested their profits in the business. Employee turnover was low, and always paid at least competitive wages. Successful entrepreneurs built up great loyalty, and selected their employees with care, even trying to recruit the best ones nationally, not just locally, and paying them well. The firms spent much on production equipment (retraining valued employees, importing capital goods as needed, and introducing robotics), upgrading vehicle fleets, seeking competitive advantage, and reinvesting profits. They minimized expenditure on office staff, support positions (using outside contractors), and insurance. They purchased newer vehicles. Agility is factor in the success of small businesses: they can redirect quickly as conditions change and revise their production scheduling. Another is simplicity: how they keep financial records, structure their organization, outsource what they don't do well, and keep their product line focused.

Stock ownership is usually closely held, unless they need more capital, in order to keep more control and have fewer shareholders to placate. They pay key employees with money; not by issuing shares. Financial characteristics: low debt levels, cash flow valued above profit orientation, savings from being taxed like partnerships, keeping cash on hand as a profit driver, and little or no formal financial planning. Dick noted that three formerly well-established businesses failed due to heavy debt load and loss of their ablest customer interface person (in sales or marketing). Successful firms need good advisers: accountants, tax planning experts, expert consultants, and lawyers. His study included seven non-family businesses of which five were sold, typically due to the owner's other business interest, offers received, or plans to sell after a certain time. Dick's conclusion—what works for small businesses: having two or more managers, of whom one must be good at customer interface; acquiring needed expertise by adding owners (shareholders) or board members; starting off well - no major losses at outset; recruiting and retaining good employees by compensating them well; reinvesting in the business; keeping ownership limited; practicing aggressive business expansion but conservative finances; maintaining agility; improving constantly; and considering selling if the right opportunity presented itself. In the ensuing discussion, members said that some types of business are inherently risky, e.g. restaurants; an entrepreneur may fail at one business but come back to succeed in another; small businesses are less likely to be sued than large ones; finding investors may raise capital, but owners of small firms often don't want to give up control; small businesses are apt to have fluctuating fortunes; management may get tired and stop improving the business; the importance of grooming a successor; in a family-owned firm the third generation may do better than the second; and the fate of O.W. Houts & Sons.

Next meeting: on 10 June, Mick McKay will speak about "The Fabulous Year of 1927." The meeting adjourned at 7:45.

Respectfully submitted, Art Goldschmidt, Secretary

CENTRAL PENNSYLVANIA TORCH CLUB MINUTES (10 June 2015)

Stephen Smith called the meeting to order at 6:50 p.m. Mick McKay introduced his wife, Joyce. Lee Stout introduced his guest, Bob Hendrickson, and reported that the Club remains solvent. Gary Miller spent a week in Ogunquit, ME. Marylee Taylor spoke about reading *The Boys in the Boat*. Lee and Dee Stout attended a wedding in the Florida Keys. Steve has just returned from a trip to Washington and Idaho for his brother's 50th wedding anniversary. He presented for membership Robert Igo, who was approved unanimously. The new president is Gordon DeJong, who announced that James Serene will be our next vice president. He also distributed a list of the speakers and their talks for the 2015-2016 program year, Steve introduced Meredith Rousseau (Lancaster Club), our district director, here for her second visit. She urged members to attend IATC conventions and to consider hosting a regional meeting of District 2 clubs. She presented to the club a certificate of congratulations on the 60th anniversary of its founding.

Mick McKay's talk was on America in "The Fabulous Year 1927." It was an exciting time. The American people were proud and felt themselves financially invincible. Their hero, Charles Lindbergh, made the first solo flight across the Atlantic in a light single engine plane with ample fuel but very few instruments. Everyone wanted to meet him on his triumphal tour across the US. In that year Chicago opened its first airport, and the first scheduled flights, between New York and Boston, began. Home electrification rose from 1/3 in 1920 to 2/3 in 1927. US industry led the world, with a large and skilled workforce, plus ample natural resources that Americans viewed as inexhaustible, and ample capital due to European repayment of their war debts. 1927 saw the invention of pop-up toasters, the laying of the first transatlantic telephone line, and the first public demonstration of television. Cars revolutionized American life: independence, changing family life, cities and suburbs, and greater mobility for rural people. Thanks to Henry Ford's invention of the assembly line, the cost of a Model T fell from \$850 in 1910 to \$260 in 1927. Competition from other brands forced him to shut it down for six months to retool for the innovative Model A, which cost \$470. The time it took to produce a car had fallen from 12 hours in 1910 to 10 seconds in 1925. In 1927 85 percent of US households owned a car. Production outstripped demand for the first time in 1928. Aided by an influx of Southern Blacks, Northern cities grew, and labor was plentiful. Though the average work week had been 60 hours as recently as 1920, it was down to 40 hours industries by 1927.

That year saw the completion of the River Rouge Plant near Detroit, Cleveland Terminal Tower, and New York's Holland Tunnel. Women could vote, but most followed their menfolk in how they voted. They could get jobs and earn their own money. They could display affection in public, dance, drink alcohol, and take risks just like the men. Freed by the new household appliances, women had more free time. 1927 was a banner year for Broadway shows; Showboat allowed black and white actors to sing together on stage for the first time. The first "talkie" was released: The Jazz Singer. The first acting award was made, at first to Rin Tin Tin but then to Emil Jennings. The Fight of the Century took place: Gene Tunney vs. Jack Dempsey, and 50 million heard the boxing match on radio. Baseball, the national pastime, featured Babe Ruth (60 home runs that year) and Lou Gehrig. Silent Cal Coolidge was a popular president, although he did nothing. Stock prices rose 2.5 times in five years, fueled by speculation and the ability to buy shares for just 10 percent down, and Washington left Wall Street alone. But the federal government did respond to the great Mississippi flood, for which Herbert Hoover headed the relief effort. The father of Prohibition died in 1927, when the manufacturing of alcoholic beverages became the fifth largest US industry. Gang-sters who flouted Prohibition flourished, as murders of gang leaders rose. The only way authorities could arrest them was on federal income tax evasion. Al Capone opened soup kitchens for poor people and provided free milk to school children. He controlled Chicago's 10,000 speakeasies and made \$105 million in 1927. It was an exciting year, notably for women. Birthrates fell, divorces rose, and wives shared in making major household decisions. In the discussion, Art and Lee told of their fathers' coming to New York in 1927, Meredith noted that women's political participation lagged because they had less education, and Ming Tien asked how many Americans lived on farms. The meeting ended at 8:10 p.m.

Respectfully submitted, Art Goldschmidt, secretary