Predators, Pests, and Parasites: The Players in Biocontrol

In fields of wheat or cotton, or vineyard rows—and indeed on most agricultural land—a raging conflict occurs under cover of leaves, belying the pastoral calm of germination, growth, and harvest. Insects chew, suck, gnaw, bite, burrow, lay eggs... And farmers, desiring an unblemished crop, seek to thwart them. Pests, predators, and parasites, farmers, researchers, farm advisors, and salemen are the characters embroiled in the fray.

One such character is Daniel González, an entomologist at the University of California at Riverside. For five years he has been collaborating with Mexican scholars to manage the conflict through biocontrol, which is the regulation of pest numbers by natural enemies. González’s collaboration with Mexican researchers began with a UC MEXUS development grant in 1986 for cotton pest research, and a subsequent United States Department of Agriculture grant, and has continued with the help of two other UC MEXUS grants in 1988 and 1989 for collaborative research in biocontrol of the variegated grape leafflower and the Russian wheat aphid.

The most common way for farmers in the United States to attack their foes, such as the grape leafflower, is the quick way—with pesticides. But pesticides are environmentally and economically costly: Chemicals seep into drinking water; the residues poison birds, mammals, insects, and reptiles, and contaminate soil. They are expensive to buy and to apply and the desired effects are short-lived. Pesticides kill many kinds of insects, not just the "bad" ones. Thus, the farmer must use more and more chemicals as he attempts to keep in check population explosions of harmful insects undaunted by the spraying but whose natural enemies have been decimated. Insects repeatedly exposed to pesticides are selected for genetic resistance to the chemicals—only the most hardy survive and reproduce—and the desperate farmer dumps more and more of the costly chemicals on his crop. The escalating costs and ineffectiveness of the increased use of insecticides finally render many pests unmanageable and the farmer must abandon an afflicted crop for another less attractive to his insect rival.

(See Pests, page 5)
Guest Editorial
By James R. Carey

Coping with the Medfly: Perspectives on Eradication and Control

Few agricultural pests have raised the emotions of Californians as has the medfly and its so-called 'invasion.' In California this past summer, suburbanites confronted farmers and the state's agricultural bureaucracy over mass spraying in residential neighborhoods in attempts to eradicate the pest. Ironically, all parties in the controversy are responding to the same set of assumptions, simply stated: That the medfly appears randomly in the state, hitching rides in luggage and fruit; and that each fly recovered is a lone and recent immigrant.

The solution, then, is introduction of each fly at the border, followed by targeted spraying to eradicate any flies, and their possible offspring, that get past the border checkpoints. The actions dictated by these assumptions are intensive searches of baggage and agricultural imports at points of entry, and mid- and post-spraying in circumscribed and disconnected regions of the state. When traps are empty by the end of November, eradication is proclaimed, the invasion repelled.

In March of this year I testified to the California Legislature that the pattern of medfly captures over the past several years suggests that the pest may in fact be established in California. Since then I have come to realize that patterns of medfly appearance in California are strikingly similar to two other regions where the medfly is a persistent problem—southern Mexico and Florida. The medfly may have established multiple beachheads on the continent, and the year-to-year re-appearance of medflies in each of these areas may be not only periodic and possibly magnified by more important, symptoms of an insidious, on-going, three-pronged occupation at the North American perimeters—Mexico in the south, California in the west, and Florida in the east.

If establishment has occurred on the continent, and my data suggests this may be a possibility, then we need to consider what kinds of international policies we need to deal with the medfly in the context of its establishment, rather than internally, as prey.

The process of exotic pest invasion is much like a chronic disease. True containment is not possible, perhaps thousands, of times before satisfactory conditions exist for survival and reproduction. But once establishment does occur, then the adoption and expansion phases may take decades. Indeed, three pests established on the east coast of the United States—the gypsy moth, Japanese beetle, and apple maggot—are still expanding westward. For example, the apple maggot required well over a hundred years to spread to California by way of the north-central states and the Pacific Northwest. The California Department of Food and Agriculture concede that even two years ago that the apple maggot was in the state for good. A general pattern of spread for all three species is that none jumped any of the advancing front. Rather, the populations moved slowly, inexorably westward at as little as 30 to 50 miles per year. The same slow and consistent process may be taking place with the medfly in North America.

The possibility that the medfly may be established in three regions of North America—California, Florida, and Mexico—can be drawn from the following five points:

Appearance Year by Year. The medfly has been captured in or near Miami, Florida in six out of the last eight years, near Tapachula, Mexico in 14 of the last 14 years and in Los Angeles County, California five out of the last five years and nine out of the last eleven years. Nowhere else on the North American continent have medflies been captured with such regularity. In fact, there are few other places on the entire continent (e.g., Santa Clara County, California; Tampa and Orlando, Florida) that medflies have been captured at all.

Rarity of "Hotspots." If appearance of medflies in North America were due solely to random movements, it would stand to reason that more than three medfly hotspots should exist. Destinations of migrants and tourists that supposedly continually introduce medflies to Los Angeles and Miami include every other place in the United States where medfly could survive—and such U.S. metropolitan areas as Atlanta, Jacksonville, Pensacola, New Orleans, Dallas—Fort Worth, Houston, and San Antonio, El Paso, Phoenix, Bakersfield, Sacramento and Fresno. Never in the history of each of these areas has a medfly been captured or detected. Surely at least one medfly would turn up in one of these cities if they were being carried in at high rates.

Likewise, in Mexico hundreds of thousands, probably millions of travelers move around the country carrying fruit. Yet in the Tapachula area, the almost only place in the entire country where the medfly is recovered, why are medflies not found in the world's fourth largest city—Mexico City—with a population of over 14 million? Or in the other nearly metropolitan zones of Toluca, Puebla, and Cuernavaca which collectively form the so-called "megalopolis" of the greater Mexico City area? This enormous population is larger than the combined populations of Miami, Los Angeles and Tapachula. The climate is ideal, hosts are plentiful and people travel to and from this area at will. Why not medflies in Acapulco, Guadalajara, Monterrey, Tijuana or Veracruz? In short, there is no congestion of the medfly on the other north metropolitan areas in North America should be immune from medfly introduction and colonization except for Miami, Los Angeles and Tapachula. A logical explanation is that the flies are reproducing locally in each of these major hotspots.

Within-Year Seasonality. In all three areas where the medfly is found, a distinct seasonality occurs that is consistent with areas of the world with similar climates. In tropical climates of the northern hemisphere, such as in Central America, the majority of medflies are captured in the spring from about March through June. This is exactly the pattern followed in Tapachula and in Florida. For example, in Tapachula 86% of all medflies are captured in these three months. The timing of the first medfly discovery in Florida for 12 of the 14 years we have records shows that the medflies in the state fell in the four month period from March through June. Every year almost all medflies found in southern California were captured in the late summer—only four months—August, September, October and November. This pattern exactly matches that seen in the Mediterranean regions of Europe where the fly is endemic. In short, seasonality in all of these cases implies a syn-chrony that would be unlikely if the problem was due to random reintroductions.

Reoccurrent in Local Neighborhoods. In each of the three medfly hotspots, medflies often reappear in the same neighborhoods over a two- or more year period. For example, in Los Angeles there are three main pockets of medfly reoccurrence—the Culver City area, the Northridge/San Fernando Valley, and Baldwin Park/Whittier. Flies have been found within several blocks of earlier infestations in each of nearly a dozen cities in southern California, and flies are found year after year in relatively large numbers in only Los Angeles County. This would not be expected if the problem was due to recurrent introductions in that many more flies should then be found in the surrounding counties, because the size and other conditions of the other northern California counties is collectively roughly the same as Los Angeles County. Most of the infestations in Florida since 1983 have occurred repeatedly in Dale County in the Miami suburbs of Miami Springs, North Miami, Hallandale, as well as the "Havana" section of downtown Miami. In Tapachula medflies consistently reappear not only in the county in which this city is located, but also Mocopozitla County to the north and Hixla County to the west.

Scarcity of Medfly Interceptions. The apparent entry rates of the medfly into the state of California are exceedingly low. For example, only ten medfly interceptions have occurred in California since 1985—two at border stations, five at airports and three in the mail. In contrast there have been over 4,000 interceptions of medfly in the very important fruit flies (e.g., the oriental fruit fly and the Mexican fruit fly) in this same period. This translate approximately 1:1000 interceptions of other species, yet the medfly is the primary fruit fly species captured in the field. Only ten medflies have been intercepted in Mi-ami Airport in the last six years but over this same period around 3800 in-terceptions of other fruit fly species were made. Additionally the California Department of Food and Agriculture has conducted three airport blizzards in both Los Angeles and San Francisco International Airports, inspecting the baggage of over 75,000 passengers from Mexico, Central and South America, Europe, Asia, and Hawaii. While fruit was found that contained pest fruit fly larvae, none of the larvae was identified as medfly. These intensive inspections basically confirmed the general findings of the USDA records of the past six years—that even common but medfly interceptions are exceedingly rare. The general point is that medflies are being transported far less than anyone ever previously thought.

Of the infestations, in my opinion the most important and explosive is the one in southern Mexico, because: 1) medflies are tropical in origin (i.e., Africa) and the climate in Tapachula is tropical; 2) medflies found in that region are fully adapted to not only the tropical climate but also to the host crops since they were introduced from neighboring Guatemala; and 3) flies are distributed over a wide band from the border to as much as thirty to forty miles north. But this delineation represents a national and not a biological distinction, since it is really not a band but the northern frontier of a population extending all the way to the Mexican border and has the same biological and demographic characteristics as the population in Mexico. It is in this region that the medfly is adapted to an entirely new and rapidly expanding environment.
Pests (continued from page 1)

González says that in some fields in Central Americas farmers spray pesticides daily to control infestations of pests triggered by the upsurge of nature and subsequent absence of natural enemies. In California intensive spraying of the grape leaftopper on grapes induced the problem of spider mites: Pesticides killed not only the grape leaftopper but also the natural enemies of the mites, and so the mite has risen to being a facto lord of the fields. González said there are "no approved chemicals to kill them. The others are too expensive."

In spite of such disasters incurred by pesticides, the farmers use chemicals for the quick fix when no alternatives are available, or because he does not know what will happen if he employs alternative methods to protect his crops. While the level of insect damage brought on by repeated pesticide treatment rarely happens in unplanned fields, said González, "it is fear of the unknown," of what would happen without pesticides application that perpetuates much of the use of chemicals. He compares pesticides to antibiotics which, while beneficial at times, also often are used unnecessarily, he says, because "no one wants to take a chance."

González and Raúl Loez López, director of the National Institute for Research in Forestry, Agriculture, and Livestock (INIFAP) for Baja California, are working to develop effective alternatives, such as biocontrol, so that farmers can protect their crops and use pesticides only when essential. Biocontrol is based on the balance of nature, on insects eating insects, on the control of pests through natural enemies. If infested by predators which capture other insects and eat them, or parasites (these lay their eggs on or inside other insects so newly hatched larva may derive nourishment from the host), hence killing or "parasitizing" them, are not eradicated by pesticides, they will keep many of the population levels of pests in check. The farmer may lose some crops to pests, but this loss is at least partially offset by the elimination of annual purchases of chemicals.

An understanding of the "economic threshold" the balance in each phase of plant growth between how much money is spent to kill the pest and that earned from the harvest is crucial to the farmer's acceptance of biocontrol. "Usually," said González, "when there is an abundant presence of beneficial insects, the number of pests is low enough so there is no economic reason to use chemicals." Once a biocontrol program is established, there are few, if any, maintenance costs.

The number of pests that can be tolerated without the farmer's suffering economically changes with each of the four major growth periods of many crops: the establishment phase, the fruit formation phase, the fruit maturation phase and, finally, harvest. During the first period, there are usually few pests and natural enemies. The numbers of pests rise rapidly, however, during the second and rich harvest periods of the period, is abundant presence of beneficial insects, the number of pests is low enough so there is no economic reason to use chemicals. Once a biocontrol program is established, there are few, if any, maintenance costs.

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UC Riverside Entomologist
Daniel González
in the United States, play a crucial part in such study. Many Mexican small farmers, who use no chemicals because of the expense involved, plant several crops. This diversity of chemically-untreated plants, or "alternate reservoirs," attracts many kinds of insects. González has concluded that the greater the variety of insects—pests as well as other harmless insects—the better and more varied the food supply to sustain the pests' natural enemies throughout the growing season. Hence, the balance between natural enemies and pests essential to biocontrol is maintained.

Huge farms planted in a single crop do not support natural enemies well because there simply are not enough food resources. González says farmers of these plantations need to identify their main pest and employ a variety of other alternative methods of control such as viruses, bacterial mixtures, or pheromone-scented strips treated with chemicals and placed between rows of plants, attracting only specific insects which are then killed by the insects.

"There are situations where there are no alternatives but to use chemicals," González commented, "but we easily can reduce the use of chemicals in crops by at least seventy-five percent. The secret is to have enough diversity, enough alternate, untreated plant reservoirs, to support natural enemies." In Mexico, the diversity of crops and insects through such alternate, untreated plant reservoirs means González and León López can "test ideas [for biocontrol] under optimum conditions," said González.

The testing of ideas also is facilitated by the willingness of Mexican farmers to cooperate with research. When INIFAP is ready to promote a new agricultural strategy, it asks to use portions of farmers' land as demonstration plots. León López says that INIFAP last year had about forty demonstration fields to display all kinds of techniques, including methods to reduce the level of pesticide use in cotton. "The farmers know the risks of new techniques, but they like to give us opportunities for demonstration because the economics of most crops are so high that they are interested in reducing any inputs," said León López. Under INIFAP's direction the farmer establishes two plots—one relying on pesticides and the other on biocontrol. Later, INIFAP conducts tours of the plots to demonstrate to other farmers the efficacy and good sense of biocontrol.

Mexico provides a receptive arena for biocontrol research, González says, because there are good researchers and research facilities in Mexico; and above all, good attitudes. "In Mexico they tend to look at crops in a more integrated way. Here, we're too discipline oriented," he said. "That is biocontrol research—which seeks to understand complicated interdependencies in nature and hence agriculture—must involve entomologists, plant pathologists, nematologists, agronomists, and irrigation experts, among others. He believes that in the United States interdisciplinary research is not as widely practiced as it should be. Like González, León López has found the collaboration to be highly beneficial. León López said, "If we do not have this kind of collaboration, it is not possible to do more than evaluate pesticides. With this project, we are recognizing other ways of reducing infestations."

The dramatic moment in biocontrol of an introduced pest is the release of a new natural enemy in the field. But researchers' first task is to find that natural enemy. Their method generally is to find out where the pest originated, determine what natural enemies evolved with it and which have been the most effective for the longest time, and then bring these insects back to the laboratory where they are quarantined, studied, raised, and finally released, after which researchers will evaluate the economic advantage of biocontrol using that particular insect.

The Russian wheat aphid is an introduced pest which probably originated in Asia where, controlled by natural enemies, it causes little or no damage. Recently, it found its way into Mexico and into the western United States where, unlike in northwestern Mexico, few effective enemies exist and so it is doing 150 to 200 million dollars worth of damage each year. It is important to detect problems beforehand. So the collaboration has given us the opportunity to be careful with this new pest." León López is cautious when he speaks of the Russian wheat aphid. He does not want Mexican farmers to think a new, dangerous pest has arrived and so run to the stores for pesticides. "We suspect natural control will be enough," he said.

Farmers may not want to wait through the long process of study, release, and evaluation. Indeed, González said at a recent conference on the Russian wheat aphid, "we plan to rear and release as many populations of as many species [of predators and parasites] as we can within budgetary limita-

tions" and not wait until more and more studies have been conducted to determine which may be the best species. He knows he is in a race. "There are four to six kinds of aphids. The Russian wheat aphid is the one that can cause the most serious damage. I have been talking to wheat farmers in the Santa Ynez Valley [in California]. I have looked at farms in numerous counties. We have found only a few seriously infested fields out of more than one-hundred inspected. We have several potentially good parasites. But if they start spraying, all aphids will need chemicals, and the parasites won't have a chance."

The challenge to an effective Russian wheat aphid biocontrol program is the simple fact that pesticides work fast and the initial results look good. By contrast, González says, it takes two to five years after parasite females have been released for the pest population to level off. No government subsidies are offered to help or encourage farmers to stick through the waiting period without insecticides, and market standards frequently call for produce without a bluish.

So the battle in the fields continues, and González and León López play their parts through research. Regarding the grape leaffopper, González said, "We have a better understanding of the inventory we have to work with. More options are available than we thought." He says they have completed their third summer of evaluating the effectiveness of parasites in the field.

As for the Russian wheat aphid, González has traveled to China, Pakistan, Iraq, Greece, Czechoslovakia, Turkey, and Spain to study and collect its natural enemies. Meanwhile, in the northwest of the Mexican Valley in Mexico, León López is sampling three or four small plots every week to look for the aphid's enemies. He says he and fellow researchers have found a native Mexican predator which feeds on many kinds of aphids, including that recent immigrant, the Russian wheat aphid. It is now being studied at Riverside.

Maybe one day soon a Mexican predator will be released into the wheat fields of the western United States, and binational collaboration will extend further into the chewing, burrowing, egg-laying world of insects.
Chicano Society and Culture: An Introduction to Mexico

The "other Mexico"—Mexicans living in the United States—is a people some say have long been ignored by the Mexican government. In the past, according to Manuel Carlos, professor of anthropology at the University of California at Santa Barbara, Mexicans received minimal attention from the Mexican government. The relationship was conducted mainly through the consular corp and, said Carlos, was "largely of an emergency nature given the small staffs and the ever-increasing number of Mexican citizens who have been migrating to the United States." While presidential candidates of Mexico frequently have had to explain Mexico's ties with its people north of the Mexican border, the promises have been emotion-packed words only, the stuff of which campaigns in many countries are often woven.

During his campaign for the presidency, Carlos Salinas de Gortari too pledged to improve contact between the Mexican government and Mexicans in the United States. Initially, the promise was given little credence. Carlos explained, "President Salinas de Gortari took more than a year from the time he took office in December 1988 to get his program off the ground, but then he had large compelling issues to deal with such as Mexico's national debt, rising inflation, and massive unemployment which keeps driving Mexicans to the U.S." Juan Vicente Palermo, professor of anthropology and director of the Center for Chicano Studies at UCSB, said that the first indication of Salinas' intention to keep his campaign pledge was a keynote speech by Mexican Secretary of State Fernando Solana before the annual meeting of the Mexican American Legal Defense and Educational Fund. He said, "...the Mexican government wishes to establish closer ties with the Mexican-American community. Because of our shared language, beliefs and values, we see the Mexican-American community as an ideal vehicle for better and more effective communications with the United States. Traditionally, there have been contacts between the Mexican government and the Mexican-American community. However, we need to broaden their scope and make them more fruitful."

So Solana announced Salinas' intention to establish an office in charge of strengthening contact with the Mexican community in the United States. Next, Javier Barros-Valero, under-secretary in the Department of Foreign Affairs, visited several University of California campuses to explore increased academic and cultural links between Mexico and the United States. Barros-Valero reiterated that Salinas would develop a new directorate in the Department of Foreign Affairs to reach out to Mexicans and Mexican of Puerto Rican descent living outside of Mexico. And in November 1989 Salinas officially established the Office of Mexican Communities Abroad.

Roger Díaz de Cossío, who reports directly to Javier Barros-Valero, was appointed director. Díaz de Cossío holds a Ph.D. in engineering, was professor and coordinator of science and research at the Universidad Nacional Autónoma de México (UNAM), a member of the governing board of Mexico's National College Foundation for Scientific and Technological Research, and, as undersecretary of education under President Echeverría, created the free bookkeeping system used in Mexico today.

In response to these tidings, Palermo and Carlos suggested to Barros that the officials newly appointed to the Office for Mexican Communities Abroad might benefit from a basic introduction to the issues of the Mexican American community. Carlos said, "It would be unrealistic to believe that a handful of foreign service officials can cover a long period of neglect which began in the first decades following the U.S.-Mexico war which established the current U.S.-Mexican border and separated Mexicans and Mexican Americans from their ancestral home. Many misunderstandings must be clarified and ongoing and open dialogue must prevail, along with a constant consultation by the appointed foreign service officials with all the leaders of segments of Mexican and Mexican American organizations and with other leaders in the Mexican American community including elected public officials, educators, the press, writers and artists, businessmen, and university professors. Thus, the idea of a training seminar for the Mexican officials was conceived and it came into being as the International Conference on Chicano Society and Culture held at UCSB in the week of April 25, 1990.

The one-day conference entitled academic discussion, visits with the Mexican American community, and receptions so members of the community, the Mexican officials, and academics could mingle informally. The Mexican officials watched the video "Chicano Park," attended a Cinco de Mayo community celebration, listened to a talk by César Chávez about pesticides, and attended an exhibit of Mexican artists at Santa Barbara City College.

Palermo said that the object of the academic discussions was to give UCSB Chicano faculty to make presentations on Chicano issues, and to demonstrate their interests in fields such as literature, art, demographic studies, and immigration.

Later, visits were arranged with members of the community, such as bilingual teachers, principals, and parents. They talked, for example, about educational problems immigrant children may meet in Mexico: a teacher is regarded by children as awe. Students show respect by humbly looking at the floor when talking to the teacher. But in the United States teachers think that such behavior means the student does not care about school.

Leaving the academic arena for the agricultural, the officials were taken to the rural town of Guadalupe in northern Santa Barbara County where they met with farmworkers, and visited a local school. Community members organized a luncheon with the City Council and school and community organizations, whose members spoke about what the Mexican government could do for them.

Several important recommendations to be initiated by the Office of Mexican Communities Abroad were generated from the conference. These include the development and institutionalization of programs with the purpose of achieving long-term goals, thus overcoming changes which may follow the election and appointment of new Mexican officials; establishment of a private, non-profit foundation to carry out different programs and activities as well as a number of consulting committees to advise the program; the creation of a museum of Mexican American and Chicano Art in Mexico City; a program to enhance knowledge about Mexican cultural, historical, and linguistic heritage among Mexican Americans and Mexicans in the United States; and the development of solutions to some of the problems faced by the families of migrants in the U.S.—whether documented or undocumented—such as their living and working conditions, health insurance, and children's education.

Perhaps the most tangible recommendation calls for the distribution of Mexican educational materials, reference books, historical and literary studies as well as other topics—all published in Spanish—to university campuses and bookstores in the United States. In fact, a pilot project has been established in which ten sets of Mexican books are being distributed to Santa Barbara public schools. The conference may become an annual event. According to Carlos, discussions on topics already discussed in Mexico are becoming real in Mexico. On November 12 in Mexico City, author Américo Paredes, human rights activist César Chávez, and scholar Julián Samora will receive La Medalla Águila Azteca, the prize bestowed on non-Mexicans for meritorious contributions to the Mexican people. This is the first time in its history that the prize has been awarded to United States citizens of Mexican descent.

Franklin Elementary School. From left, Alfonso Ramón Bagui, Egidio Cruz, Teresa Valdez, Rogelio Medrano, Elia Espinosa, Graciela Orozco, Acting Co-Principal Vida García, Teresa Franco, Assistant Superintendent Blas M. Garza, Santa Barbara School District, Berenice Rendon, Juan Vicente Palermo, and Acting Co-Principal Valery Rivera.

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Mexico Database Project

The Mexico Database Project, based at the University of California at Riverside, is a program established to make population information about Mexico easily accessible to the public, policymakers, and researchers. While a great deal of such information about Mexico exists, it can currently be found only in scattered, unrelated documents. As a result, according to the project's co-directors, Edgar W. Butler, professor of sociology at UCR, and James B. Pick, director of the UCR's Institute for Policy Research, many decisions that affect both Mexico and the United States are made without full use of available data. The project is developing the computerized Geographic Information System (GIS) to collect in one place information on the states, municipalities, and delegations of Mexico for administrative, planning, research, and policy decisions.

The GIS currently consists of a floppy disk, a book called the Atlas of Mexico (reviewed in UC MEXUS News, Winter 1990), and computer-generated maps, all available to the public. The floppy disk and accompanying codebook enable the user to integrate data or do statistical analyses using approximately 450 variables associated with the 31 states and the Federal District of Mexico. The information stored on the disk is similar to that found in the Atlas of Mexico—population and urbanization, marriage, fertility, and family planning, migration, education, political characteristics, economy, population economics, and transportation and communication. The Atlas presents only one variable at a time—the number of criminal trials per Mexican state in 1979, for example—whereas the disk allows the user to interact with variables, such as crime and unemployment. The disk also provides historical information from 1855 through 1980, while, because of space restraints, the Atlas is limited to the years 1980 through 1985. Both the disk and the Atlas present information only by state, but information about municipalities as well as 1990 census data will be added this year to the disk.

"Mexamérica," one of the most recent of the computer-generated maps, presents Mexican municipalities and U.S. counties in California, Colorado, Arizona, New Mexico, and Texas. The map was developed as a means to demonstrate and analyze the relationships between the U.S. border region and Mexico. Users may plot dimensions (cities, migration streams, mortality rates, agricultural production, etc.) by hand themselves, or, for an extra cost, request maps or overlays geared to a specific interest.

For more information about the Mexico Database Project contact Edgar W. Butler or James B. Pick at Mexico Database Project, Department of Sociology, University of California at Riverside, CA 92521. Tel: (714) 787-4732. "Mexamérica" and the disk and codebook may be ordered through the Mexico Database Project. Codebook and disk, $200. Mexamérica map, $45. The Atlas of Mexico should be ordered from Westview Press, 5500 Central Ave., Boulder, CO 80301. $55.00.

Chicano Database at Berkeley

The Chicano Database, a bibliographic resource on Chicano (defined here as people of Mexican descent residing in the United States), was created by the Chicano Studies Library at the University of California at Berkeley to provide greater access to literature on Chicano. It is now available in a CD-ROM format, through which librarians in public and academic libraries can direct users to over 36,000 citations to articles and books pertaining to Chicano/Latino-related studies. The Chicano Database also contains the Latinos and AIDS database created by the Chicano Research Center at UCLA. Segments of the Chicano Database have been published in print format under the following titles:

The Chicano Periodical Index (six volumes covering 1967-1988 provide subject, author, and title indexing to Chicano and mainstream journals)


The Chicano Anthology Index (author, title, and subject access to 5000 previously unaccessible anthology articles, poems, and short stories)

The Chicano Database on CD-ROM (Version 1.0) is published and distributed by the Chicano Studies Library at UC Berkeley Knowledge Access Interna- tional of Mountain View, California has produced the disk which, together with retrieval access software, is available for $495.00. The disk will be updated periodically.

Berkeley Chicano/Latino Policy Project Founded

In spring 1986, with sponsorship from the University of California at Berkeley Program in Mexican Studies, Berkeley faculty initiated the Chicano/Latino Policy Project to coordinate interdisciplinary research and training on policy issues related to the U.S. Chicoano/Latino population. The project received University support in March 1989 through the Institute for the Study of Social Change and hence is known as the Berkeley Chicano/Latino Policy Project. The project received University support in March 1989 through the Institute for the Study of Social Change and hence is known as the Berkeley Chicano/Latino Policy Project. The project received University support in March 1989 through the Institute for the Study of Social Change and hence is known as the Berkeley Chicano/Latino Policy Project. The project received University support in March 1989 through the Institute for the Study of Social Change and hence is known as the Berkeley Chicano/Latino Policy Project. The project received University support in March 1989 through the Institute for the Study of Social Change and hence is known as the Berkeley Chicano/Latino Policy Project. The project received University support in March 1989 through the Institute for the Study of Social Change and hence is known as the Berkeley Chicano/Latino Policy Project.

It is the belief of the project's founders that a better understanding of the changing composition of California society and patterns of persistent inequity for Latinos, as well as other underrepresented minorities, will directly benefit the University in fundamental ways. Work in this area forms the development of curriculum and research programs in policy studies, social sciences, applied fields, and American cultures; and an informed analysis of the specific dynamics of inequity, by sector, economic trends, state educational policy, and related issues assists the university administration and faculty in the development of responsive and effective staff, enrollment, and administrative policies which address affirmative action goals.

To these ends the project promotes collaborative research, develops mechanisms for the effective exchange of ideas, provides training and research opportunities for undergraduate and graduate students, disseminates policy-relevant research publications, and conducts outreach meetings for public officials, non-profit advocacy groups, and the general public. The project encourages research in the areas of California Chicano/Latino policy, state fiscal policy, the changing roles of Mexican and other Latin American origin women in the California workforce, private and public sector investment strategies, and civic or political participation. Initially, the project will emphasize work in four broad interdisciplinary areas: 1) education, youth, and family; 2) language, language policy, and culture; 3) migration and immigration; and 4) economic and political participation.

Building on the base of affiliated faculty and researchers and the material resources of campus libraries and computing facilities, the Chicano/Latino Policy Project will sponsor initiatives in the following four areas: 1) Research Development—faculty and graduate students will organize projects to develop research methodology, access central data sets, and collaborate with colleagues or mentors. Under the auspices of the project, graduate students will receive training to acquire advanced skills in scientific methodology and analysis in conjunction with the offerings of academic and professional school departments. 2) Instructional Support—the project will work with campus units to develop advanced training courses on topics of interdisciplinary policy studies, involving methodology, analysis, interpretation, and substantive issues in basic and applied research related to Chicano/Latino concerns. 3) Collection and Analysis of Data Sets and Library Materials—affiliated researchers will work with campus library and archival staff to identify areas for improvement of Berkeley's data, manuscript, document, periodical, and book collections in Latino policy studies, building on existing resources in order to develop more effective application and development of statistical information to social policy topics. 4) Specialized Outreach to Policymakers and the General Public—the Project Steering Group will implement an outreach program to include policy briefings, specialized seminars, publications, internships, specialized research, and related activities for policymakers, advocacy groups, community and labor organizations, and journalists, as well as the general public.

The project currently is governed by an executive committee which includes Graciela Valdés, Joe Martinez, Jr., Alex Saragosa, Margarita McVicel, and Martín Sánchez-Jankowski, project chair. Vice Chair Andrés Jiménez was appointed in February 1990 and manages the project's day-to-day operations under the leadership of the project chair and executive committee and in consultation with Troy Duster, director of the Institute for the Study of Social Change. For more information about the UCB Chicano/Latino Policy Project, contact Andrés E. Jiménez at the Institute for Social Change, 2420 Nowland St., University of California, Berkeley 94720. Tel: (415) 642-6003.
Scripps and CICESE  
Sign Memorandum of Understanding

Directors of UC San Diego's Scripps Institution of Oceanography (SIO) and the Centro de Investigaciones Científicas y de Educació Superior de Ensenada (CICESE) signed June 1 in Ensenada, Baja California a memorandum of understanding covering present and future scientific cooperation between the two institutions. Scripps is one of the oldest and largest centers for marine science research and graduate training in the world. CICESE (translated to English as Center for Scientific Research and Higher Education of Ensenada), is a highly-regarded Mexican center for earth sciences and marine research.

"It is the sense of both institutions that regional cooperation is essential for a more complete understanding of phenomena and processes of potentially regional and global significance," said Edward A. Frieman, director of SIO. The memorandum marks a result and celebration of seventeen years of intensive and productive informal, international marine science meetings. SIO and CICESE scientists have cooperated in many scientific projects in geo-ecology, especially in regard to seismic monitoring, large-scale marine ecological monitoring in the Gulf of California; fisheries population base-line studies, especially with regard to commercially important species; paleontology, through the study of stratified sediments in the anoxic Guaymas Basin; and in the field of optics.

UC MEXUS Announces Grants for 1990

UC MEXUS is pleased to announce 1990 grants for support of faculty research, development of collaborative research programs, creative activities, Chicano studies, and thesis/dissertation research in areas of interest to the Consortium. Awards totaling more than $233,000 have been made to 33 UC faculty and students under the following programs:

Development Grants

Development grants support activities essential to the development of major proposals to extramural agencies for large research projects, conferences, exchanges, instructional development, and public education activities. Listed below are the principal investigators receiving these contracts, primary UC and Mexican collaborators, and the project titles.

Aquileria, Renato - Los Angeles. (Maria Elena Zarota - La Raza Medical Center) Molecular and Biochemical Studies on the Transformation Mechanism Responsible for the High Incidence of B-cell Tumors in Mexico.


Taylor, J. Edward and Benjamin S. Ovchir - Davis. (Antonis Yianitsis-Nauda - IL College de Mexico) Migration, Consumption and Development in Rural Mexico.

Creative Activities Grants

Creative Activities grants support research and activity culminating in the creation of new works of graphic art, painting, fiction, music, dance, film, poetry, drama, or photography which are distinctly Mexican or Chicano in subject or style. The program is partially supported by funds allocated in response to the SCR 43 project. Listed below are the principal investigators, home campus, and project titles.

Barrera, Mario - Berkeley. (Latinos in Film Film.

Herrera Sobek, Maria - Irvine. (Rosa Francisca Pescaro - Santa Barbara) Speak for Myself: Chicana/Latina Filmmakers and the Geography of Borders.


Thesis/Dissertation Grants

Grants in this program support work leading to the master's thesis or doctoral dissertation. Below are the UC student grantee, home campus, and project titles.


Kaus, Andrea - Riverside. Local Cooperation with Environmental Conservation Programs.

Kroesen, Kendall W. - San Diego. Culture, Illness, and Health in a Mexican Town.


Maffi, Luisa - Berkeley. A Linguistic Analysis of Tzeltal Maya Ethnozoological Knowledge.


Yáñez-Chávez, Aníbal - Berkeley.


Critical Issues Grants

The Critical Issues Program supports collaboration between UC and Mexican scholars towards the completion of conference papers addressing issues critical to the U.S.-Mexican relationship and which are presented at UC MEXUS conferences. The program is sponsored by the John D. and Catherine T. MacArthur Foundation. The Critical Issues scholars for 1990 and their project titles are listed below.


Rodriguez, Eloy - Irvine. (Rosa Lucia Fragoso - Santa Barbara) Speak for Myself: Chicana/Latina Filmmakers and the Geography of Borders.


Thesis/Dissertation Grants

Grants in this program support work leading to the master's thesis or doctoral dissertation. Below are the UC student grantee, home campus, and project titles.


Kaus, Andrea - Riverside. Local Cooperation with Environmental Conservation Programs.

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Maffi, Luisa - Berkeley. A Linguistic Analysis of Tzeltal Maya Ethnozoological Knowledge.


Yáñez-Chávez, Aníbal - Berkeley.

Announcements

UCSD Third College Lecture Hall Named for Faustina Solís

The University of California Board of Regents voted in July to name the University of California at San Diego Third College Lecture Hall the "Faustina Solís Lecture Hall" for former Third College Provost and Assistant Chancellor Faustina Solís. Solís served as Provost of Third College from 1981 to 1988, and accepted the additional responsibilities of Assistant Chancellor for Affirmative Action while acting as Provost. Solís founded the Department of Community and Family Medicine at UCSD's School of Medicine in 1971. In 1976, she took a leave of absence to serve as deputy director of the Public Health Division of the State of California Health Department. After two years with the State, she resumed teaching at UCSD. Solís has received numerous prestigious awards throughout her career, the most recent being in 1990 when she received the first National Award for contributions to Latino Leadership from the National Hispanic Women's Association.

Endowed Chair Named for Luis Leal

The University of California at Santa Barbara has named an endowed chair in Chicano Studies in honor of the nation's most senior scholar in Chicano Studies—Luis Leal—who is recognized internationally for his contributions to the multidisciplinary study of Mexico, Latin America, and the experience of Chicanos in the United States. The Luis Leal Chair in Chicano Studies will be funded by an endowment of $400,000 donated by corporate and individual sponsors.

Saraaga Heads UCB Program on Mexican Studies

Alex M. Saraaga, associate professor of Chicano Studies and former director of the Center for Latin American Studies at the University of California at Berkeley, has been appointed to head the Program in Mexican Studies of the UCB Center for Latin American Studies.

Jorge Castañeda at UCB

The Center for Latin American Studies and the Institute of International and Area Studies will host Jorge Castañeda as a visiting professor for the spring semester, 1991. Castañeda, a professor at UNAM, is the co-author of Limits to Friendship, a columnist with the Los Angeles Times, and a frequent contributor to Mexican and North American journals and magazines regarding U.S.-Mexico relations. At Berkeley, Castañeda will offer an undergraduate course on U.S.-Mexican relations and a graduate seminar called the "Latin American Left." He will be available for talks at other UC campuses. For information contact Alex M. Saraaga, CLAS, University of California, Berkeley, CA 94720. Tel: (415) 642-2088.

Border News Information System

The Department of Public Administration Studies at El Colegio de la Frontera Norte has established the Sistema de Información Fronteriza, partially funded through UC MEXUS, which is a computerized data base of newspaper articles about the border region. The newspapers cited are ABC, Diario Baja California, El Mexicano, Zona, Novedades de Baja California, La Voz de la Frontera, Excelsior, La Jornada, Uno mas Uno, Los Angeles Times, San Diego Union, and New York Times. Individuals or public or private institutions may subscribe or order single issues of the monthly bulletin, which summarizes news articles.

Through another service offered, the Servicio de Información Específica, the user may request information pertaining to certain themes, regions, or time periods which will be sent as hard copy or on a diskette (IBM 360 kb format) using ASCII or the Wordstar, Wordstar 2000, Wordperfect, or Microsoft Word word processing programs. The user may choose between the short notes as published in the bulletin or a longer, more detailed summary of the newspaper article.

For more information write Sistema de Información Fronteriza, Abelardo L Rodríguez, Nm núm 21, Zona del Río, 22120 Tijuana B.C., México or, in the United States, P.O. Box L, Chula Vista, CA 92012. Tel: 84-20-68.

In Memoriam

UC MEXUS mourns the passing of two friends, and acknowledges here their many contributions to the Consortium.

Daniel G. Aldrich, Jr., chancellor emeritus of the University of California, Irvine, member of the UC MEXUS Critical Issues Advisory Committee, and co-chair of the 1989 Neighbors in Crisis conference, April 9, 1990, in Orange, California.

Richard J. Waltsack, former associate editor of the UC MEXUS NEWS, anthropologist, writer, and actor, October 15, 1990, in Riverside, California.

Mexican Academic Clearing House

MACH (Mexican Academic Clearing House) sells single and multiple copies of Mexican books and serials, including government publications; handles selective blanket order services for academic libraries; and offers free referral service and periodical book lists. MACH includes mainly new editions and recent reprints of items of interest for Latin American studies. Write for further information to MACH, Apartado Postal 13-319, Delegación Benito Juárez, 03000, México, D.F. Tel: 674-05-67 and 674-07-79.

Faculty Assistant for Academic Affirmative Action

Joe L. Martinez, Jr., professor of psychology, has been appointed faculty assistant for academic affirmative action at the University of California, Berkeley. Working with The Vice Chancellor John L. Hellbrun, Martinez will have a major role in UCB's continuing efforts to diversify its faculty. Martinez will advise the campus administration on new policies and ongoing efforts to attract, hire, and promote minority faculty. He also will review all departmental administrative action plans, merit and promotion cases involving minorities, and cases involving alleged discrimination. A faculty member since 1982, Martinez is a specialist in psychopharmacology and the neurobiological basis of learning and memory, as well as cross-cultural psychology and Chicano psychology.

Nosotros Organization's Special Tribute Awards

The Nosotros Organization in Los Angeles, which for the past twenty years has helped to promote the culture of Hispanic Americans in the entertainment industry, has awarded director Jorge Huerta a Special Tribute Award in Theatre. Huerta is head of the University of California, San Diego's Hispanic-American Theatre Program. With partial support from a UC MEXUS grant, Huerta recently wound up a seven-city European summer tour with members of the UCSD Teatro Nuevo Siglo (Theater for a New Century). The ensemble consists of students from the UCSD Hispanic-American Theatre Program. Prior to the tour, Huerta directed the one-man dramatization, I Am Celso, the premier production of México's Mágica, San Diego's first professional Latin theatre company. A professional director and actor, and author and leading academic authority on contemporary Chicano and Hispanic-American theater, Huerta has directed such noted plays as Burning Patience by Antonio Skarmeta and Los Vendidos by Luis Valdez.

Faculty Openings in Public Policy

The Graduate School of Public Policy at UCB invites applications for two appointments to the faculty at the associate/full professor rank. The School seeks to broaden the diversity of its faculty by appointing individuals who add new perspectives and new expertise. It particularly seeks individuals interested in the relationship between public policy analysis and issues pertinent to one or more ethnic minorities, although those who can contribute to other areas consistent with the research and teaching mission of the School shall be considered. Qualified applicants must have a doctoral degree of its equivalent and, at the senior level, a significant publication record. Deadline for application is January 15, 1991. Candidates should send a cover letters, vita, a sample of research, and the names of three references to Lee S. Friedman, Faculty Search Committee, Graduate School of Public Policy, 2007 Hearst Avenue, University of California, Berkeley, CA 94720.

Chicano Art Exhibition

"Chicano Art: Resistance and Affirmation, 1965-1985," a comprehensive national exhibition on the history of Chicano art, will be on view at the UCLA Wight Gallery through December 9. It features over 150 works of art by more than 90 Chicano artists from throughout the United States. The multimedia exhibition explores the relation of the Chicano art movement to El Movimiento, the Chicano civil rights movement that occurred from the mid-1960s to the late 1970s in the United States, and recognizes Chicano art as a distinct and influential movement in American art. A fully illustrated catalog will be available. To order the catalog by mail, call (213) 825-1461. Following the UCLA appearance, the exhibition will travel to the Denver Art Museum, CO; the Albuquerque Museum of Art, NM; the San Francisco Museum of Modern Art, CA; the French Institute, LA; the Tucson Museum of Art, AZ; and the National Museum of American Art, Washington, D.C. For further information call (213) 825-9345.

Josefina Vázquez at UCB

Josefina Vázquez, a widely recognized historian from El Colegio de México, will be a visiting professor with the History Department at the University of California, Berkeley. Vázquez will teach two courses, including a survey class on Mexico.

UCLA Study on Information Gathering in Ethnic Communities

Cheryl Dunn, assistant dean of UCLA's Graduate School of Library and Information Science, has been awarded $57,57 from the California State Library to study information-seeking behavior of members of the American Indian, Hispanic, and Asian communities.
communities in Southern California. From her research findings, Duran will suggest approaches California's public libraries can use to identify information networks in ethnic communities and more effectively deliver information services to those networks.

Winners of UCSD Center's Fellowship Competition

The Center for U.S.-Mexican Studies at the University of California, San Diego, has announced the winners of its eleventh annual residential fellowship competition. The Center's Visiting Research Fellowships are made possible by grants from the John D. and Catherine T. MacArthur Foundation, the Ford Foundation, the Rockefeller Foundation, the Szokely Foundation for American Volunteers, and the University of California, with general support from the William and Flora Hewlett Foundation. The 19 scholars awarded fellowships for 1990-91 are:


In addition, the following guest scholars will be in residence at the Center during 1990-91:


Funding and Fellowship Opportunities

Fellowships in Reproductive Health Policies

The Center for Reproductive Health Policy at the University of California at San Francisco announces domestic and international fellowships supported by the William and Flora Hewlett Foundation. The one-year international fellowships are meant to prepare recipients for positions of leadership in reproductive health policy and the evaluation and management of programs. Fellowships are open to non-U.S. citizens, especially Mexicans, who have at least a master's degree in social sciences, psychology, medical anthropology, sociology, or public health, and who have an advanced knowledge of technical English. The deadline is March 15, 1991. For more information contact Claire Brindis, Box 0936, Center for Reproductive Health Policy Research, Institute for Health Policy Studies, University of California, San Francisco, CA 94143-0936. Tel: (415) 476-4921.

Two-year domestic fellowships are open to U.S. citizens with a Ph.D. or an M.D. and who are interested in developing skills in reproductive health services and policy research. The deadline is February 1, 1991. For more information contact Nancy Ramey, Box 0936, Center for Reproductive Health Policy Research, Institute for Health Policy Studies, University of California, San Francisco, CA 94143-0936. Tel: (415) 476-4921.

Fellowships/Research and Training Opportunities at Center for U.S.-Mexican Studies

The Center for U.S.-Mexican Studies at the University of California, San Diego, is accepting applications for Visiting Research Fellowships to be held during the year beginning September 1, 1991. Since 1980, the Center has hosted more than 190 scholars and non-academic experts from 15 different countries. Fellowships are offered at both the doctoral and postdoctoral levels, for research and writing on any aspect of contemporary Mexico (excluding literature and the arts), Mexican history, U.S.-Mexican relations (including immigration), Mexico's international economic and political relations in general, and broader comparative or international political economy projects that have a substantial Mexico component (excluding comparative immigration studies). Mexico-based researchers wishing to study some aspect of the United States are especially encouraged to apply. Applications from journalists, public officials, and other non-academic professionals are also welcomed. Students seeking admission to the Ph.D. program in any of the social sciences or history at UC San Diego for Fall 1991 may also apply for a fellowship from the Center. Each Fellow is expected to spend from 3-12 months in continuous residence at the Center. Summer fellowships are not offered. Applications must be received by
International Opportunities in Biomedical Research

The John E. Fogarty International Center offers bilateral exchanges to U.S. and foreign postdoctoral biomedical, behavioral, and health scientists. There is no deadline. For more information contact Fogarty International Center, Bldg., Rm. 613, Bethesda, MD 20892. Tel: (301) 496-6688.

Summer Institute on Mesoamerican Civilizations

The Department of Anthropology at the University of Pittsburgh is sponsoring a National Endowment for the Humanities Summer Institute on Mesoamerican Civilizations. The Institute will take place in Pittsburgh, June 24 through August 2, 1991. The Institute is intended to enrich college teaching in related fields including Mesoamerican history, geography, anthropology, and art history. It seeks to enable participants to expand existing courses and develop new ones by presenting a synthesis of current understandings of the pre-Columbian societies which thrived for 3000 years before Cortes. Twenty-five places are open for eligible college teachers who will receive a small stipend and expenses. Applications are due March 1, 1991. For more information contact Jeremy A. Sabloff, Dept. of Anthropology, University of Pittsburgh, Pittsburgh, PA 15260. Tel: (412) 648-7500.

U.S.-Latin America Cooperative Program

The Scientific, Technological, and International Division of the National Science Foundation provides support for workshops and scientific visits to Mexico and other Latin American countries. There are no deadlines. Contact NSF, Scientific, Technological, and International Division, 1800 G Street, Washington, D.C. 20550. Tel: (202) 357-9564.

Research on the Urban Underclass

The Social Science Research Council offers four fellowship and grant programs in 1991 to support research on the urban underclass. The purposes of the programs is to advance research on the structures and processes that generate, maintain, and overcome the conditions and consequences of persistent and concentrated urban poverty in the United States. Undergraduate research assistantships offer financial support of up to $500 per student to support research conducted by undergraduate students in collaboration with faculty and/or advanced graduate students. Up to five undergraduate students may receive support in connection with a single project. Dissertation fellowships provide financial support of up to $22,000 for full-time research directed toward the completion of the doctoral dissertation. The summer dissertation workshop for minority students provides training in research design and analysis to assist students in developing a dissertation proposal. Postdoctoral grants provide up to $37,500 to support research by scholars with a Ph.D. or comparable research experience. Application deadlines are September 1, 1991. Contact Social Science Research Council, 1133 Avenue of the Americas, New York, NY 10036. Tel: (212) 869-8500.

Funds for the Peace and the Quality of Life

The Compton Foundation supports broad social science programs in the area of global human survival problems. The Foundation focuses in the areas of peace and world order, population pressures, environmental problems, education, social welfare and social justice, and the improvement of life in non-Western cultures. No deadline. For more information contact Compton Foundation, Inc., 10 Hanover Square, New York, NY 10005. Tel: (212) 510-5409.

Program for Science-Based Development

The Rockefeller Foundation offers fellowships in agricultural sciences, health sciences, and population sciences. The program's aim is for scientists to work in cooperation with selected developing countries to enhance those countries' abilities to interact with international scientific and related development institutions. For information about the program and various deadlines contact Rockefeller Foundation, 1133 Avenue of The Americas, New York, NY 10036. Tel: (212) 869-8500.

U.S. National Science Foundation

The U.S. National Science Foundation offers grants for predoctoral dissertation fellowships in the humanities for the 1991-92 academic year. Supported by a grant from the Rockefeller Foundation, the fellowships are available to junior and senior scholars in institutions with strong graduate programs in the humanities. Scholarships are available for periods from six to twelve months with a maximum stipend of $35,000 plus research and travel expenses. Application deadlines are December 31, 1990. Contact Raymond A. Porreds, Chicano Studies Research Center, University of California, Los Angeles, CA 90024. Tel: (213) 825-7411.

Geological Research Grants

The Geological Society of America offers postdoctoral support for research by graduate students who are candidates for the M.S. or Ph.D. degree at universities in the United States, Mexico, Central America, and Canada. Confidenial evaluations from two faculty members are required from candidate for the M.S. or Ph.D. degree and must accompany application. For more information contact Research Grants Administrator, Geological Society of America, P. O. Box 9740, Boulder, Colorado 80301. Deadline for applications is February 15, 1991.

Literatures and Cultures of Latin America

The Department of Spanish and Portuguese at the University of Maryland at College Park invites applications for resident fellowships for a semester or year to conduct work on "The Literatures and Cultures of Latin America." Resident fellowships are limited to post-doctoral applicants (Ph.D. or equivalent). Senior and junior scholars from any country are eligible. Application deadline is December 15, 1990. For more information contact Saul Sarnocinski, Chair, Department of Spanish and Portuguese, 2215 Janney Hall, University of Maryland, College Park, MD 20742.

Research Collections

The National Science Foundation offers support for systematic research collections whose maintenance will preserve essential scientific resources at the national or international level. There is no deadline. Contact National Science Foundation, Biotic Systems and Resources Division, 1800 G St., N.W., Washington, D.C. 20550.
Meetings

Call for Papers on the Impact of Natural Disasters

An international conference, "The Impact of Natural Disasters," will be held at UCLA July 10-12, 1991. Drawing from many disciplines, the conference will examine the impacts of natural disasters (earthquakes, storms, floods, volcanic eruptions, wildfires, droughts, environmental problems, etc.) at local, national, and international levels. The conference seeks to bring together academic, governmental, and private interests to present results of research and past experience and to discuss an agenda for the future in terms of needed research, mitigation, and appropriate policies.

Those interested in presenting papers should submit an abstract of about 1000 words and a short C.V. by December 15, 1990. Accepted papers will be due April 15, 1991. For more information contact Samuel Arens, Conference Chair, GSAUP, UCLA, Los Angeles, CA 90024-1467. Tel: (213) 825-7450. Fax: (213) 206-5566.

Ethnic Studies for the Twenty-First Century

The National Association for Ethnic Studies (NAIES, Inc.) will be hosting a conference, "Ethnic Studies for the Twenty-First Century," March 7 - 10, 1991. The theme will be interpreted from many perspectives: arts, humanities, social and behavioral sciences, natural sciences, education, public policy, and politics. The conference will be held at California State Polytechnic University, Pomona. More information write James H. Williams, Dean, College of Arts, Cal Poly Pomona, 3801 West Temple Avenue, Pomona, CA 91764-4051.

Language, Culture, and Society in the Americas

The international conference, "Language, Culture, and Society in the Americas," intends to benefit higher education faculty, teachers of English as a second language, teachers of Spanish as a second language, teachers of Portuguese, specialists in Latin America, foreign student program directors and advisors, and others interested in current and future issues related to north-south relations in the Americas. General abstracts and corner current panels will consider questions of mutual concern in the area of linguistics, cultural diversity, and social and environmental issues. The conference is sponsored by the University of South Florida, the Universidad de los Andes, and VENUSA, the Venezuelan United States of America Cultural Program of Spanish Abroad. The conference will take place February 14 - 16, 1991, in Mérida, Venezuela. For more information contact Julie Corcoran, Program Coordinator, Division of Conference and Institutes, ULL 012, University of South Florida 4202 E. Fowler Avenue, Tampa, FL 33620-8700.

Summer Seminar in U.S. Studies

The Center for U.S.-Mexican Studies at the University of California at San Diego will hold its Third Summer Seminar in U.S. Studies for Latin American Scholars and Non-Academic Professionals during the summer of 1991. The program offers intensive, multidisciplinary training in U.S. studies for Latin Americans. The goal is to promote the development of U.S. studies programs in Latin America, to expand existing programs, and to provide in-depth knowledge about U.S. politics and society to journalists and government officials. For information regarding the curriculum and faculty as well as application forms for the 1991 seminar contact Graciela Platero, Program Representative, Center for U.S.-Mexican Studies, University of California, San Diego (D-010), La Jolla, CA 92038; Tel: (619) 334-4503. Fax: (619) 334-6447.

Review

By Alejandro Morales

In recent years Hollywood dramatic films dealing with Latin issues, such as Zoot Suit, La Bamba, Stand and Deliver, and The Milagro Bean Field Wars, have deservedly drawn attention and financial resources, while unfortunately, Chicano documentary films like To Say Chicanos, Cinco Vidas, El Grito de las Madres, El Dorado, and The Unwanted, among others, have waned in popularity and impact. Chicano Park, a documentary film produced by Marilyn Mulford and Mario Barrera and directed by Marilyn Mulford, is a timely film gem which brings attention to the documentary as an entertaining and educational genre.

The success of Chicano Park reflects the cinematographic experience and knowledge of Chicano history that Marilyn Mulford and Mario Barrera command. At Mulford can be credited years of technical expertise as producer, director, editor, and sound technician. Barrera, an associate professor of Chicano Studies at the University of California, Berkeley, co-produced Northwest from Tamanancet and has published widely in the fields of political science and cultural history. Chicano Park is the outgrowth of a thirty-five minute documentary on Logan Heights which Mulford made ten years ago. The film tells the story of a "dream to free Logan" Heights, a Chicano barrio located between the fast expanding civic center and the port of San Diego, California. It is a story of "a piece of Aztec robust," a story which reaches back to the metaphysics of a mythic Indian past and propels itself forward to contemporary Chicano history.

Mulford and Barrera are careful in describing the geographic location and history of Logan Heights, seventeen miles from the international border, in the United States and Mexico. The boundaries between Logan Heights and San Diego are as cosmopolitan to the international border, the Chicanos have lived in Logan Heights for hundreds of years, since when before the establishment of the international border. The people of Logan Heights have worked in the agricultural fields, the fish canneries, the docks, the shipyards and the aircraft industry. Chicano Park is a history of the people of Logan Heights and the 17-year struggle to save their "barrio." The narration translates this form as meaning "photo" in English. Nonetheless, what the filmmakers present are the images of a dynamic "community" becoming aware and seizing political power. They stand up to the City Hall, the Highway Patrol, and Cal Trans and take over a piece of land, under the freeway, designated for a Highway Patrol station. The plot is converted by the community into Chicano Park, which long before had been promised to them.

The effort to win and build Chicano Park is told by the residents involved in the political negotiations and confrontations. The filmmakers place their subjects in very personal and concrete situations and environments and allow them to speak from, for, and about their home turf. The results are exceptional cinematic portraits of individuals who are warm, candid, and accessible to the viewer. They represent a human cross-section of Logan Heights, for everyone was involved. Men and women, the young and the elderly, participated side by side to win the park.

These interviews are memorable. Laura Rodrigues, community organizer, narrates her family history and her involvement in the struggle to save her community. Yolanda Lopez describes her life in Logan Heights and how the faces of the women she knew became the sources of inspiration for her images of the Virgin de Guadalupe. Josie Talamanter, born and raised in Logan Heights, tells
New Publications

Publications announced below may be ordered directly from the publisher.

Popular Movements and Political Change in Mexico
Edited by Joe Foweraker and Ann L. Craig. Lynne Reiner Publisher, 1800 30th Street, Boulder, CO 80301. Tel: (303) 444-6864. In association with Center for U.S.-Mexican Studies, University of California, San Diego, 1990, 280 pp., paper $15.95, cloth $35.00. Focuses on the interactions between the political system and popular movements as organized groups of peasants, teachers, city dwellers, women, and students have crowded into the political arena to pose new challenges to the old order of political control.

The Mexican Empire of Ixturbide
By Timothy E. Anna. University of Nebraska Press, 901 N. 17th Street, Lincoln, NE 68580-0720. Tel: (402) 472-3571. 1990, 256 pp., cloth $39.50. Focuses on the problems attributed to the fall of the Mexican empire. Traces the rise and fall of the Napoleonic Empire in Mexico and the reasons for the French invasion of 1813. Argues that the revolution for Emperor Augustin de Ixturbide's failure to retain broad national support. Draws upon eyewitness accounts and calls for a more judicious assessment of Ixturbide than that delivered by contemporary critics and political enemies.

The Death of Ramón González: The Modern Agricultural Dilemma
By Angus Wright. University of Texas Press, P.O. Box 7819, Austin, TX 78713-7819, 1990, $29.95. Claims that since 1942 Mexico has served as a laboratory for pesticide-dependent agricultural innovations under the direction of North American researchers, and that these innovations, which have since been exported around the globe, have brought disastrous consequences.

Aspects and Social Impacts of Size and Organization in the Recently Developed Wine Industry of Santa Barbara County, California
Working Papers 2. By Brian D. Haley. Center for Chicano Studies, University of California, Santa Barbara, Santa Barbara, CA 93106. Tel: (805) 967-2226. 1989, 46 pp., paper. Focuses on the re-emergence of the wine industry in Santa Barbara County over the last two decades. Shows how wine grapes increased the local demand for farm labor, drawing more Chicano/Mexican farmworkers to the area, and thereby helping to change the ethnic and class composition within the county. Also demonstrates how smaller scale enterprises were established throughout the state, ultimately reducing the average size of agricultural enterprises, which runs counter to popular and scholarly notions of the evolution of rural America.

Youth, Identity, Power: The Chicano Movement
By Carlos Muñoz, Jr. Verso, 29 West 35th Street, New York, NY 10001-2399. Tel: (212) 692-8549. 1990, 216 pp., paper $17.95, cloth $30.00. Places the Chicano movement within the wider context of the political development of Mexicans and their descendants in the United States, tracing the emergence of Chicano student activism in the 1930s and their initial challenges to dominant class and racial ideologies of the time. Documents the rise and fall of the Chicano Movement in the 1960s and concludes with an account of Chicano politics in the 1980s.

Chicano Narrative: The Dialectics of Difference
By Ramon Saldívar. University of Wisconsin Press, 114 N. Murray St., Madison, WI 53715, 1990, 250 pp., paper $13.75, cloth $25.00. Examines representative aspects of Mexican American narrative forms, including the novel, short story, narrative verse, and autobiography that have been excluded from American literary criticism. Analyzes work by such writers as Tomás Rivera, Rudolfo A. Anaya, Américo Paredes, and Cherríe Moraga.

Spanish Bluecoats: The Catalan Volunteers in Northwestern Spain, 1767-1810
By Joseph P. Sánchez. University of New Mexico Press, Albuquerque, NM 87131. Tel: (505) 277-2746. 1990, 196 pp., cloth $30.00, paper $15.95. The Free Company of Catalan Volunteers were riflemen sent to the New World from 1767 to 1815 in Spain's last effort to secure its empire. The company played a vital part in founding San Diego, discovering the San Francisco Bay, and fending off Russian and English encroachment in the Pacific Northwest. The author reveals who served in the company and how it was organized, and describes the editing of Gary Weinberg and poetic writing of Weinberg and Juan Felipe Herrera strengthens the film's emotional impact. The meta-narrative, the continuous retelling by the various cinematographic codes and narrative discourses, reveals the power in the story of Chicano Park, and is Mulford and Barrera's extraordinary filmic achievement.

While the film is an inspirational tribute to the resilience of the Chicano community, it presents a one-sided view of the battle for Logan Heights and Chicano Park. No opposing viewpoints from any San Diego City administrators are offered, and the filmmakers fail to investigate the problems attributed to the park; for example, it is charged that the park is a center for drug dealing. Mulford and Barrera might agree that these issues are material for another film.

Nonetheless, the survival of Barrio Logan and the winning of Chicano Park for the community is the fulfillment of an Aztec prophecy retold in the film: "One day our sky shall bloom in new splendor and you my people shall rise up again like tender grass to find Aztlán once more." The relevance of Chicano Park across the political and cultural commitment of the viewers and points out that there is no better time than now to begin to rekindle one's own dedication.
the Volunteers' military campaigns and remembrances.

¿Only English? Law and Language Policy in the United States

By Bill Platt. University of New Mexico Press, Albuquerque, NM 87131. Tel: (505) 277-7564, 1990, 199 pp., cloth $27.50. Examines the legal and practical consequences of attempts to regulate language in a pluralistic, multicultural United States, especially as those efforts impose on individual liberties.

Mexican Labor and World War II: Braceros in the Pacific Northwest, 1942-1947

By Erasmo Gamboa. University of Texas Press, P. O. Box 7875, Austin, TX 78714-6761. Tel: (512) 471-4932. 1990, 178 pp., cloth $25.00. Mexican workers were hired under a work contract that guaranteed certain conditions of employment, protection of civil rights, and provision for living and health needs. Shows that in practice these guarantees were often little more than empty promises.

Basesmen: A Sociological Perspective of a Chicano Barrio

By Irene I. Blea. AMS Press, 56 East Street, New York, NY 10003, 1989, $49.50. Number 2 in a series, "Immigrant Communities and Ethnic Minorities in the United States and Canada." Describes and analyzes the contemporary life of working-class Hispanic Americans in a relatively well-to-do barrio. Examines why these people, in spite of their higher incomes, prefer to remain there.

Mexican Celebrations

By Eliot Porter and Ellen Auerbach. University of New Mexico Press, Albuquerque, NM 87131. Tel: (505) 277-7564. 1990, 112 pp., 98 color plates, cloth $40.00. Photographs from 1955-56 during Christmases, Lenten, and Easter seasons. Two accompanying essays by Donna Pierce and Marshia C. Bol provide information on the evolution of these celebrations and their significance today.

Myth and the History of the Hispanic Southwest

By David J. Weber. University of New Mexico Press, Albuquerque, NM 87131. Tel: (505) 277-7564. 1990, 129 pp., paper $12.95. "Going back to the earliest Spanish explorers of the Southwest, Weber looks at some of the myths that informed the thought of Coronado and Fray Marcos de Niza. Discusses the practice of history and the influence on historiography of such respected scholars as Bancroft, Bolson, and Turner."

Provinces of the Revolution: Essays on Regional Mexican History, 1910-1929

Edited by Thomas Benjamin and Mark Wasserman. University of New Mexico Press, Albuquerque, NM 87131. Tel: (505) 277-7564. 1990, 515 pp., paper $19.95. Addressee to what degree the Revolution altered the basic socioeconomic and political makeup of the Mexican state and what part a popular uprising of the peasantry played in the course of the Revolution.

The Treaty of Guadalupe Hidalgo

By Richard Griswold del Castillo. University of Oklahoma Press, P.O. Box 787, Norman, OK 73070-0787. Tel: (405) 627-7737. 1990, 318 pp., cloth $22.95. Addresses the impact of the treaty on residents of the southwestern United States and the interpretation of the treaty by U.S. courts and by Mexican and American diplomats and intellectuals. Summarizes recent use of the document by Chicago and Indian activists.

Maya History and Religion

By J. Eric S. Thompson. University of Oklahoma Press, P. O. Box 787, Norman, OK 73070-0787. Tel: (405) 627-7737. 1990, 464 pp., paper $14.95. Analyzes Maya religious beliefs and creation myths, as well as the importance of tobacco and its uses, in order to show the continuity of Maya culture from the beginning of the Christian era to the present.

Water Works: Improving Irrigation Management in Mexican Agriculture

By Ronald G. Cummings, Victor Brajer, James W. McFarland, José Travía, Miguel T. El-Ashry, and Manuel Pueba. WRI Publications, P. O. Box 8253, Hampden Station, Baltimore, MD 21211. Tel: (301) 398-9967. 1989, 75 pp., paper $10.00. Traces Mexican agriculture from post-revolutionary land reform to recent national agricultural programs. Current water-management strategies and irrigated farming practices are analyzed in detail. Explores policy options that could alleviate Mexico's food crisis.

The State, Corporatist Politics and Educational Policy-Making in Mexico


Medical Spanish: Interviewing the Latino Patient, A Cross-Cultural Perspective


Soldaderas in the Mexican Military: Myth and History

By Elizabeth Salas. University of Texas Press, P. O. Box 7819, Austin, TX 78713-7819. Tel: (512) 471-4012. 1990, 201 pp., paper $11.95, cloth $25.00. Draws on military archival data, anthropological studies, and oral history to explore the roles played by Mexican women in armed conflicts. Examines the continuing symbol in Mexican and Chicano culture of the soldaderas through literature, corridos, art, music, and film.

Pirates of the Pacific, 1755-1742

By Peter Gehard. University of Nebraska Press, 901 N. 17th Street, Lincoln, NE 68508-0520. Tel: (402) 472-3551. 1990, 274 pp., paper $9.95. Covers almost two centuries of intrusions on Spain's prized Mexican possessions by English, Dutch, and French buccaneers such as Francis Drake, Henry Morgan, and Blackbeard.

Latinos and Blacks in the Cities: Policies for the 1990s


Edited by Georges Vermes. The Urban Institute Press and The RAND Corporation, 1700 Main Street, Santa Monica, CA 90406. Tel: (213) 933-0411. 1990, 85 pp., paper, $7.50. Assesses whether the Immigration Reform and Control Act of 1986 succeeded in significantly reducing the flow of undocumented immigrants into the United States by the end of fiscal year 1989. Intended for a broad audience with an interest in immigration and immigrant issues.

Chicano Politics: Reality and Promise, 1940-1990

By Juan Gómez-Chávez. University of New Mexico Press, Albuquerque, NM 87131. Tel: (505) 277-2346, 1990, 265 pp., cloth $29.95, paper $15.95. Examines the leaders and organizations that waged struggles for political rights as well as the evolution of their goals and strategies. Questions whether, in the jumble of competing voices and conservatism, the true majority of the Mexican community—the workers—is overlooked today.
THE
REVOLUTIONARY
PROCESS IN
MEXICO
Essays on Political and Social Change, 1880-1940
Edited by Jaime E. Rodríguez O.

A collection of essays from U.S., Mexican, and Canadian historians examining the nature of continuity and change in Mexico during the period 1880-1940 and illuminating the complexity of the revolutionary process in Mexico. Contains a pictorial essay from the University of California, Riverside, “Osuna Collection,” including images of the period 1911-1914.

Chicano Education in the Era of Segregation
By Gilbert G. González. The Balch Institute Press, Associated University Presses, 440 Forgyard Drive, Cranbury, NJ 08512. Tel: (609) 655-4770. 1990, $35.00. Analyzes the socioeconomic origins of the theory and practice of de jure segregated school facilities for Mexican Americans. Links the various aspects of segregated schools, examining Americanization, testing, tracking, industrial education, and migrant education.

Manzano: A Study of Community Disorganization
By Wesley R. Hurt. AMS Press, 56 East 13th Street, New York, NY 10003. Tel: (212) 777-4700. 1990, $54.00. Traces the history of Manzano, a Mexican-American village, from its early years as part of Mexico until 1939-40, when the village had passed into American rule and through the Great Depression.

State and Capital in Mexico: Development Policy Since 1940
By James M. Cypher. Westview Press, 5500 Central Avenue, Boulder CO 80301. Tel: (303) 444-3431. 1990, 220 pp., $32.00. Examines the role of the state in Mexico’s industrialization and the impact state policies may have had in precipitating the decline in economy, the debt crisis, and the rationalization of the banking system.

British Foreign Office General Correspondence: Mexico, 1919-1953
University Publications of America, 4520 East-West Highway, Bethesda, MD 20814-3349. Tel: (301) 492-6300. Microfilm, complete collection 1919-1958, $10,240; single years are available; new 1957 supplement, $80; new 1958 supplement, $160. Dispatches and reports from the British Foreign Office in Mexico, even during the period of 1938 to 1947 when formal relations between Mexico and Britain were severed.

Ancient Mexico
Edited by William R. Fowler, Jr., and Stephen D. Houston. Cambridge University Press, Journal Department, 40 West 20th Street, New York, NY 10011, semi-annual, institution $80, individual $40, SAA member $32, student $25. Provides an international forum for the method, theory, substance and interpretation of Mesoamerican archeology, art, history, and chronology. Authors are encouraged to submit original research papers, theoretical articles, and substantive reports of field research. Will also publish reports on important finds, news of excavations, and general interpretations. Authors should make inquiries and submit 5 copies of manuscripts to Ancient Mesoamerica, Editorial Office, Vanderbilt University, P.O. Box 6070-B, Nashville, TN 37235, (615) 343-6123.

Blue Mesa Review
Edited by Rudolfo A. Anaya. Dept. of English, Humanities 217, University of New Mexico, Albuquerque, NM 87131, 1989, $7.00 for individuals, $10.00 for institutions. An annual literary magazine that focuses on the Southwest; inaugurated with the 1989 spring issue.

diverse political viewpoints. Articles tend to be brief, in news magazine format with minimal footnotes and statistics. Contributors have included government officials and academics. The editorial board includes Sisulad Loza, Carlos Rico, Leopoldo Zas, and Carlos Bazdresch Parada. For subscription information contact Carlos M. Calvo Zapata, Pues Norte 116-B, Colonia Narvarte, Mexico 12, D.F. CP 03020. Tel: 538-87-44, 519-40-23.

Mexico Internacional
Edited by Carlos Calvo Zapata and Luis González Souza. Monthly. Contains information on Mexico’s international relations presented from

Documentary Film
Watsonville on Strike
By Jon Silver. Migrant Media Prod., PO Box 2040, Fremont, CA 94539. Tel: (408) 728-5949. 1989, 65 min., color, U-matic $300, VHS $250. Chronicles the nineteen-month strike by workers—mostly Hispanic women—in Watsonville, California’s frozen-food processing plants. Won the Silver Hugo Award at the 1989 Chicago International Film Festival by taking second place in the Independent Video Documentary category. Has been selected by PBS station WNED in New York for inclusion in its documentary series "Independent Focus."

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Illustrations in this Issue

The drawings of the medfly, *Ceratitis capitata*, on pages 2 and 4 were taken from "The Mediterranean and Other Fruit Flies," by H. J. Quayle, University of California College of Agriculture, Agricultural Experiment Station, Berkeley, California, Circular 315, July, 1929.

Other insect drawings were reprinted with permission from *University of California Publications in Entomology*, published by the University of California Press.


On page 22: *Tigrinestola tigrina*, male. Arizona, New Mexico to Sonora, Mexico and Cape Region of Baja California. 1985, Vol. 102, pg. 158.


The Editor welcomes suggestions for illustrations of future issues of the NEWS, and particularly drawings which are part of special collections held by the University of California or institutions of higher education and research in Mexico.

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